

\*\* IMAGE FOR REF. ONLY \*\*

# ITD D4 BLISS YARD SALT/MATERIAL SHED

BLISS, IDAHO

**ABBREVIATIONS** ACOUSTICALLY ENCHANCED FLOW LINE GYPSUM BOARD G.B. GRAB BAR ABOVE FINISHED FLOOR GND. GROUND ACOUSTICAL TILE GYP. GYPSUM ALUMINIUM THERMAL BARRIER H.B. HOSE BIB ADJ. ADJUSTABLE H.M. HOLLOW METAL ALUM. ALUMINUM TMIOL BLOCK PAINTED LAM. LAMINATE BLDG BUILDING MTL. METAL BLK. BLOCK 0.0. ON CENTER BLKT. BLANKET PART. BRD. PARTICLE BOARD BRD. BOARD PEMB. PRE-ENGINEERED METAL BUILDING BOTTOM PROPERTY LINE CARPET P. LAM. PLASTIC LAMINATE C.I.P. CAST-IN-PLACE P.T.D. PAPER TOWEL DISPENSER C.T. CERAMIC TILE PRE-FINISHED PRE. FIN C.M. COLD WATER R.D. ROOF DRAIN CEILING REQ REQUIRED COL COLUMN S.D. SOAP DISPENSER CONC. CONCRETE S.S. SANITARY SEMER CONT CONTINUOUS SHT. D.F. DRINKING FOUNTAIN SHTG. SHEATING SPECIFICATION DN. DOWN STD. STANDARD DOOR STEEL DRAMING SUSP. SUSPENDED SYS. SYSTEM EXTERIOR FINISH SYSTEM TONGUE & GROOVE T & G EXT. INSUL. & FIN. SYSTEM T.B.C. TOP BACK OF CURB ELECT ELECTRICAL T.T.D. TOILET TISSUE DISPENSER ELEV. ELEVATION T.T.J. TIGHT TO JOIST ELECTRICAL PANEL TYP. TYPICAL EQUAL

# **SCHEDULE OF ALTERNATES**

SCHEDULE OF ALTERNATES

- ADD ALTERNATE NO. 1: BRINE PRODUCTION AND OBSERVATION
- A. BASE BID: ALL WORK ASSOCIATED WITH CONSTRUCTION OF THE BUILDING INCLUDING SITE GRADING AS DESCRIBED ON AND IN THE DRAWINGS AND SPECIFICATIONS. BASE BID INCLUDES ALL FOOTINGS, FOUNDATIONS, AND CONCRETE SLABS ON GRADE AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. BASE BID SHALL EXCLUDE CONSTRUCTION OF PRE-ENGINEERED METAL BUILDING WALLS AND FINISHES WHERE INDICATED ON THE DRAWINGS TO ENCLOSE THE BRINE PRODUCTION AND BRINE PRODUCTION OBSERVATION SPACE. BASE BID EXCLUDES ALL MINDOMS, DOORS, AND INSTALLATION OF OVERHEAD DOORS AND DOOR OPERATORS. BASE BID INCLUDES ELECTRICAL LIGHTING, POWER AND AS INDICATED ON THE DRAWINGS.
- ADD ALTERNATE: ALL WORK ASSOCIATED WITH CONSTRUCTION OF PRE-ENGINEERED METAL BUILDING WALLS AND FINISHES WHERE INDICATED ON THE DRAWINGS TO ENCLOSE THE BRINE PRODUCTION AND BRINE PRODUCTION OBSERVATION SPACE. ALTERNATE INCLUDES ALL WINDOWS, DOORS, AND INSTALLATION OF OVERHEAD DOORS AND DOOR OPERATORS INCLUDING ELECTRICAL FOR THE OVERHEAD DOOR OPERATOR AND CONTROLS.
- 2. ADD ALTERNATE NO. 2: ASPHALT PAVING AT EXTERIOR OF
- BASE BID: ALL MORK ASSOCIATED WITH CONSTRUCTION OF THE BUILDING INCLUDING SITE GRADING AS DESCRIBED ON AND IN THE DRAWINGS AND SPECIFICATIONS. BASE BID SHALL INCLUDE ALL SUB-GRADE AND FINISHED GRADE IN PREPARATION FOR ASPHALT PAVING. BASE BID ALSO INCLUDES ASPHALT PAVING ON THE INTERIOR OF THE SALT STORAGE PORTION OF THE BUILDING WHERE INDICATED ON THE
- B. ADD ALTERNATE: ALL WORK ASSOCIATED WITH THE CONSTRUCTION AND INSTALLATION OF THE 2.5" THICK EXTERIOR ASPHALT PAVING AS INDICATED ON THE DRAWINGS.

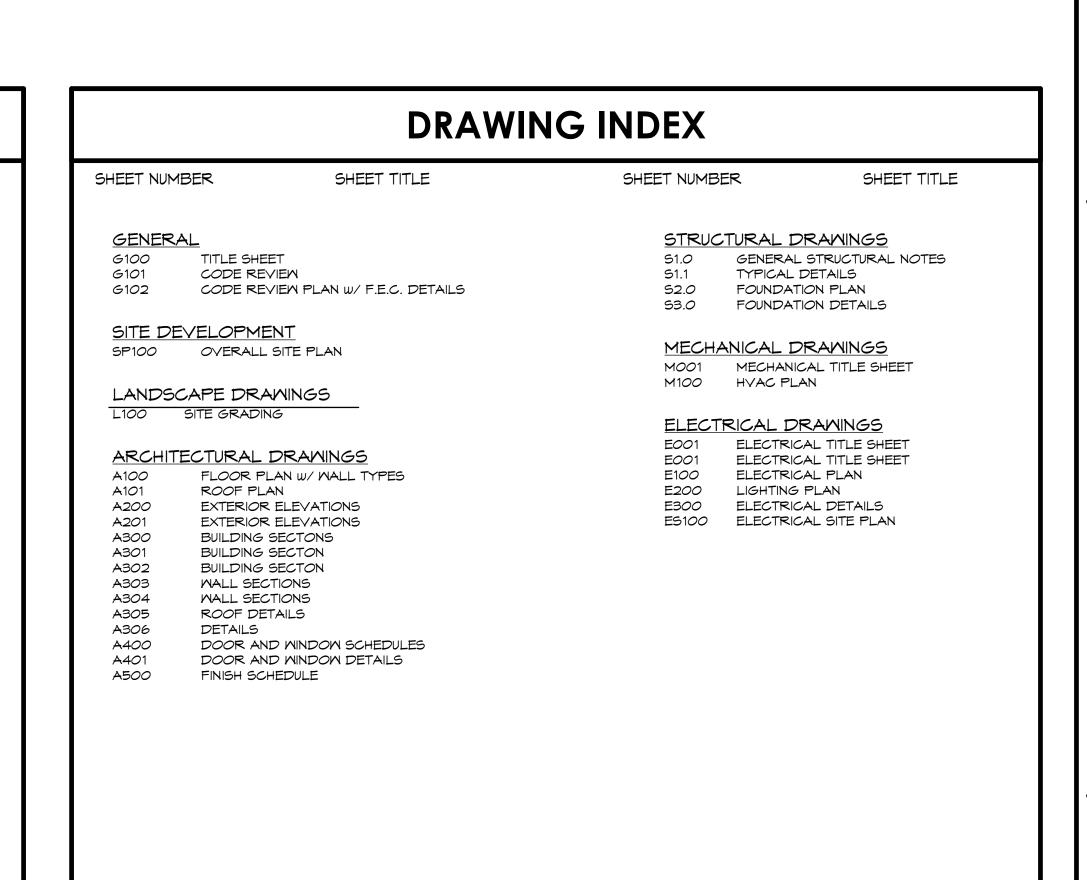
# EXIST. BUILDING GRID - ELEVATION - DETAIL NUMBER DETAIL SYMBOL SHEET NUMBER - SHEET NUMBER - SECTION NUMBER MALL SECTION -SHEET NUMBER - SECTION LETTER BUILDING SECTION — ELEVATION NUMBER BUILDING ELEVATION - SHEET NUMBER - ELEVATION NUMBER MALL ELEVATION

- SHEET NUMBER

- SHEET NUMBER

- DRAMING NUMBER

**SYMBOLS** 



### PROJECT DESCRIPTION

U.O.N.

VERT

M/D

UNLESS OTHERWISE NOTED

VERTICAL

MASHER / DRYER

MATER PROOF

MITH

MATER

PROJECT INCLUDES CONSTRUCTION OF A NEW 10,000 SQUARE FOOT SALT STORAGE FACILITY FOR ITD LOCATED ADJACENT TO THEIR BLISS, IDAHO MAINTENANCE FACILITY. THE NEW STORAGE BUILDING WILL ALSO PROVIDE A COVERED LOADER STORAGE SPACE ALONG WITH COVERED BRINE STORAGE AND A FUTURE BRINE PRODUCTION FACILITY.

### SPECIAL INSPECTION

COORD. W/ STRUCTURAL

EXIST

EXP.

F.E.C.

EXISTING

EXTERIOR

**EXPANSION** 

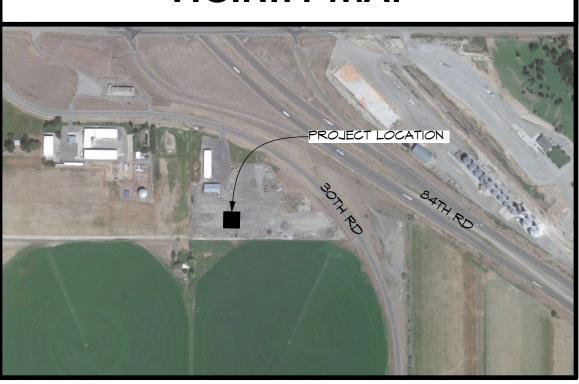
FINISH FLOOR

FIRE EXTINGUISHER CABINET

### **GENERAL NOTES**

- THE ARCHITECT OF RECORD IS NOT RESPONSIBLE FOR INTERPRETING THE INTENT OF THESE CONSTRUCTION DOCUMENTS, INCLUDING MAKING MODIFICATIONS AS MAY BE NECESSARY DURING THE CONSTRUCTION PHASE. THE ARCHITECT OF RECORD IS NOT LIABLE FOR THE WORK WHERE CHANGES TO THESE DOCUMENTS HAVE BEEN MADE.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. ALL WORK REQUIRING MEASURING SHALL BE DONE ACCORDING TO FIGURES ON DRAWINGS AND NOT SCALED FROM DRAWINGS. THE ARCHITECT SHALL FURNISH ANY MISSING DIMENSIONS UPON WRITTEN REQUEST.
- ALL WORK SHALL CONFORM TO PREVAILING CODES, ORDINANCES AND REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION AND SHALL PAY ALL APPLICABLE FEES.
- 4) DO NOT DISTRIBUTE PARTIAL SETS OF DRAWINGS OR SPECIFICATIONS. INFORMATION AFFECTING THE WORK OF OTHER TRADES MAY BE COVERED ON OTHER SHEETS.

# **VICINITY MAP**



# CONTACTS

MYERS ANDERSON ARCHITECTS 122 S. MAIN STREET SUITE 1 POCATELLO, ID 83240 PH: 208.232.3741 E-MAIL: matt@myersanderson.com STRUCTURAL ENGINEER FROST STRUCTURAL ENGINEERING 1020 LINCOLN ROAD

IDAHO FALLS, IDAHO 83401 PHONE (208) 227-8404 FAX (208) 227-8405

MECHANICAL AND ELECTRICAL ENGINEERS

MUSGROVE ENGINEERING, P.A. 645 WEST 25TH STREET IDAHO FALLS, ID 83402 PHONE: 208 523-2862

SHEET TITLE:

TITLE SHEET

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

NUMBER: 22566

March 2023

G100

	CHAP	ΓER 3			CHAF	PTER 7			CHA	APTER 10			LOCATION A	ND CODE	S
	USE AND O	CCUPANCY		FIF	RE AND SMOK	Œ PROTECTIO	DNS		MEANS	S OF EGRESS		PRC	)PERTY		
	OCCUPANCY		MAX.						NUMBER (	OF EXITS (1006.2.1)		ITD BL	.ISS YARD SALT/MATERIAL SHED		
回 OCCUPANCY TYF 回 (302.1)	FACTOR	OCCUPANCY AREA						OCCUPANCY	MAX OCC. LOA	D REQUIRED EXIT	S PROVIDED EX	BLISS,	IDAHO		
	(1004.1.2)							5-2	20	1	3				
1 5-2	500 (WAREHOUSE,	) 10,000 S.F.	20					MAX C	OMMON PATH	OF EGRESS (TABL	E 1006.2.1)	CUF	RENTLY ADOPTED CO	DDES	
								OCCUPA	ICY TYPE	MAX TRAVEL	ACTUAL	INTERN INTERN	NATIONAL BUILDING CODE NATIONAL ENERGY CONSERVATION	2018 CODE 2018	
		1						S	-2	100'-0"	0'-0"	IDAHO NATION INTERN	NATIONAL ENERGY CONSERVATION STATE PLUMBING CODE NAL ELECTRICAL CODE NATIONAL FIRE CODE NATIONAL MECHANICAL CODE	2018 2018 2018 2018 2018 2018	
		+		ļ				MA	X EXIT TRAVEL	DISTANCE (TABLE	1017.2)	INTERN	NATIONAL MECHANICAL CODE NATIONAL FUEL GAS CODE	2018 2018	
	TOTAL	OCCUPANCY	20					OCCUPANCY TYPE	MAX TRAVEL		ACTUAL				
	TOTAL	OCCOPANCI	20					5-2	300'-0"		99'-0"	ZON	IING		
l	CHAP <sup>-</sup>	TFR 1			СНДЕ	PTER 8		1019.2 ALL OCCUPAN		THAT SERVE FLOOR L	EVELS WITHIN A SING	F	DING SETBACK		
	OHA				OHA			STORY ARE NOT REC	PUIRED TO BE ENC	CLOSED.		PROPE NORTH	RTY LINE	MIN. DISTANCE	PROVIDED 223'-5"
RE	QUIREMENTS	BASED ON US	SE		INTERIOR	R FINISHES						EAST		N/A	386'-3"
				INTERIOR WA		REQUIREMENTS BY	Y OCCUPANCY					SOUTH WEST		N/A N/A	185'-10" 289'-0"
					(TABLE	E 803.11)		Z	ONING I	NFORMAT	ON	LAND	SCAPE SETBACK		1
				OCCUPANCY TYPE	CLASS	FLAME SPREAD	SMOKE	<u> </u>				LOCAL	OTOR	N/A	N/A
				5-2	C	76-200	0-450	LAND USE ZOI	NE = N/A			COLLEC		N/A N/A	N/A N/A
								IBC CODE 201	3			ENTRY\ INTERS	WAY CORRIDOR	N/A N/A	N/A
								OCCUPANCY ( CONSTRUCTION				PARK		IVA	L
								AREA OF BUIL FIRE SPRINKL	-	S.F.			IG STALLS	N/A	N/A
								FIRE ALARM S				ADA PA BIKE RA	RKING STALLS	N/A N/A	N/A N/A
												DIIL IV	HONO	1377	10/1
	CHAP <sup>-</sup>	TER 5			CHAF	PTER 9					СН	APTER 29	9		
BL	JILDING HEIGH	ITS AND AREA	S	ſ	FIRE PROTEC	TION SYSTEM	S				F	LUMBING			
	ALLOWED HEIGH	T (TABLE 504.3)		AUTOMATIC SPRINKLE	ER SYSTEM			U OCCUPANCY TY	WA DE REOL	TER CLOSETS		TORIES V/PROVIDED	DRINKING FOUNTAINS		VICE SINKS
OCCUPANCY TYPE	TYPE OF CONSTRUCTION	ALLOWED HEIGHT	ACTUAL HEIGHT	MAX DISTANCE TO FIR	RE EXTINGUISHER 906.3(1	1)	75 FEET	(302.1)		1 PER 100	1 PE	R 100	REQUIRED/PROVIDED 1 PER 1000		RED/PROVIDED ER FLOOR
S-2	V-B	40'-0"	31'-3"					1 5-2	.17/1	.17/1	FEMALE .17/1	MALE .17/1	.017/1		1/1
	ALLOWED STORIE	S (TABLE 504.4)						TOTALS:	1/1	1/1	1/1	1/1	1/1		1/1
OCCUPANCY TYPE	TYPE OF CONSTRUCTION	ALLOWED STORIES	ACTUAL STORIES												, , , , , , , , , , , , , , , , , , ,
5-2	V-B	2	1							ROVIDED IN ADJACENT TIES IN OCCUPANCIES C		AND ARE WITHIN 5	600°-0"		
00000	ALLOWED BUILDI	NG AREA (506.2)  ALLOWED AREA	ACTUAL AREA					IN OCCUPANCIES OTH EMPLOYEE TOILET FA	ER THAN COVER! CILITIES SHALL E	ED AND OPEN MALL BU BE LOCATED NOT MORI ITH TOILET FACILITIES,	ILDINGS, THE REQUIRE THAN ONE STORY AND THE SATE OF THE	ED PUBLIC AND BOVE OR BELOW	THE		
OCCUPANCY TYPE	CONSTRUCTION	SQ./FT. PER FLOOR	SQ./FT. PER FLOOR					FACILITIES SHALL NO	DL FROVIDED M T EXCEED A DIST.	ITH TOILET FACILITIES, ANCE OF 500 FEET (15	AND THE PATH OF IT	AYEL IO SUCH			
S-2	V-B	13,000	10,000					4							
	CHAP				NO	TES									
	TYPES OF COI	NSTRUCTION													
	STRUCTION (602.1)		V-B												
	E REQ. FOR BLDG.	ELEMENTS (TABLE	•												
EXTERIOR BE INTERIOR BE, NON BEARING FLOOR CONS	RUCTURAL FRAME EARING WALLS ARING WALLS G EXTERIOR WALLS STRUCTION OR ABOVE CONSTRUCTI	ON	0 1 R 0 1 R 0 1 R 1 R 1 R 0 0 0 0												

4



SHEET TITLE:

CODE REVIEW

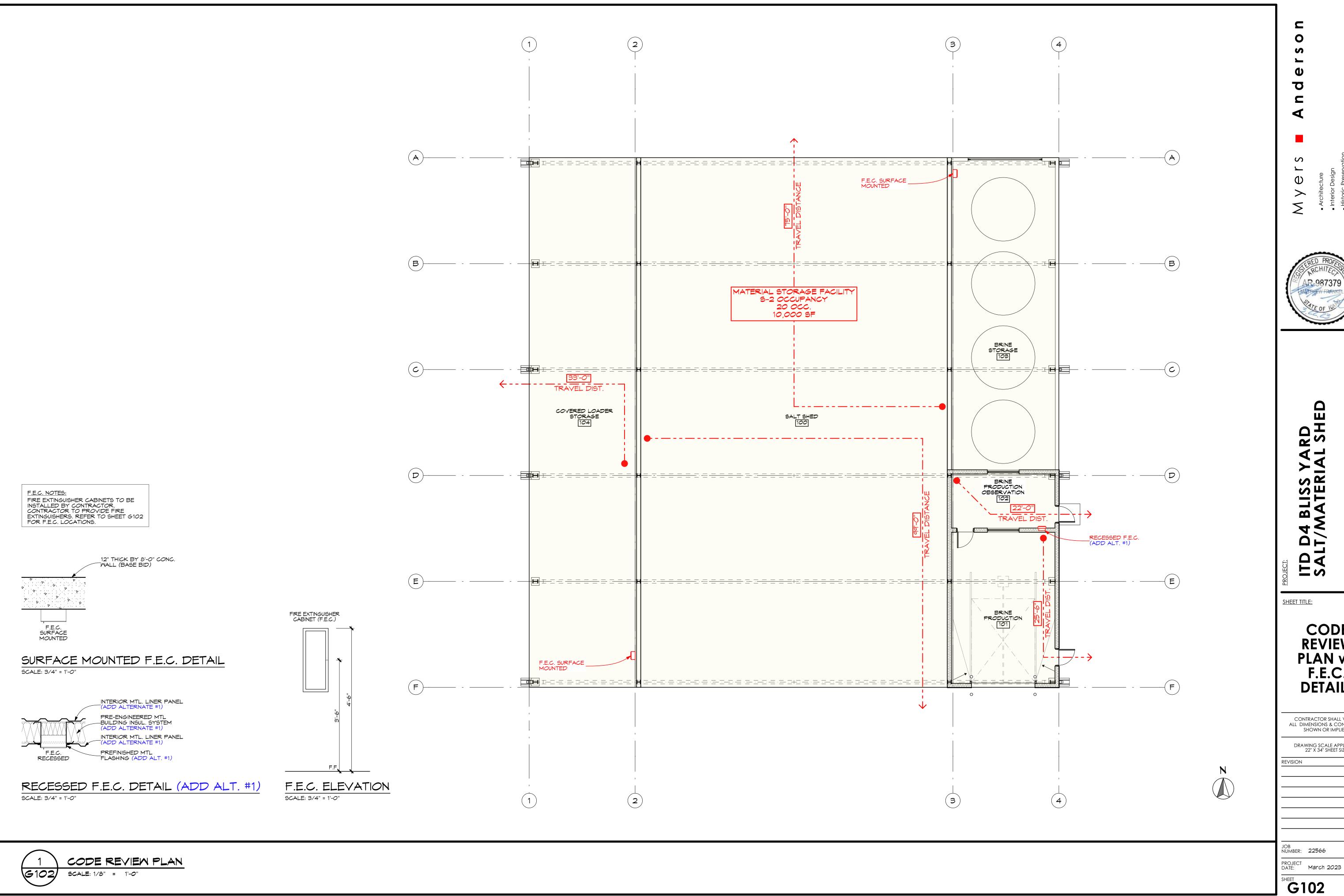
BLISS, IDAHO

CONTRACTOR SHALL ALL DIMENSIONS & COI SHOWN OR IMPLI	NDITIONS
DRAWING SCALE APP 22" X 34" SHEET SI	
REVISION	DATE

JOB NUMBER: 22566

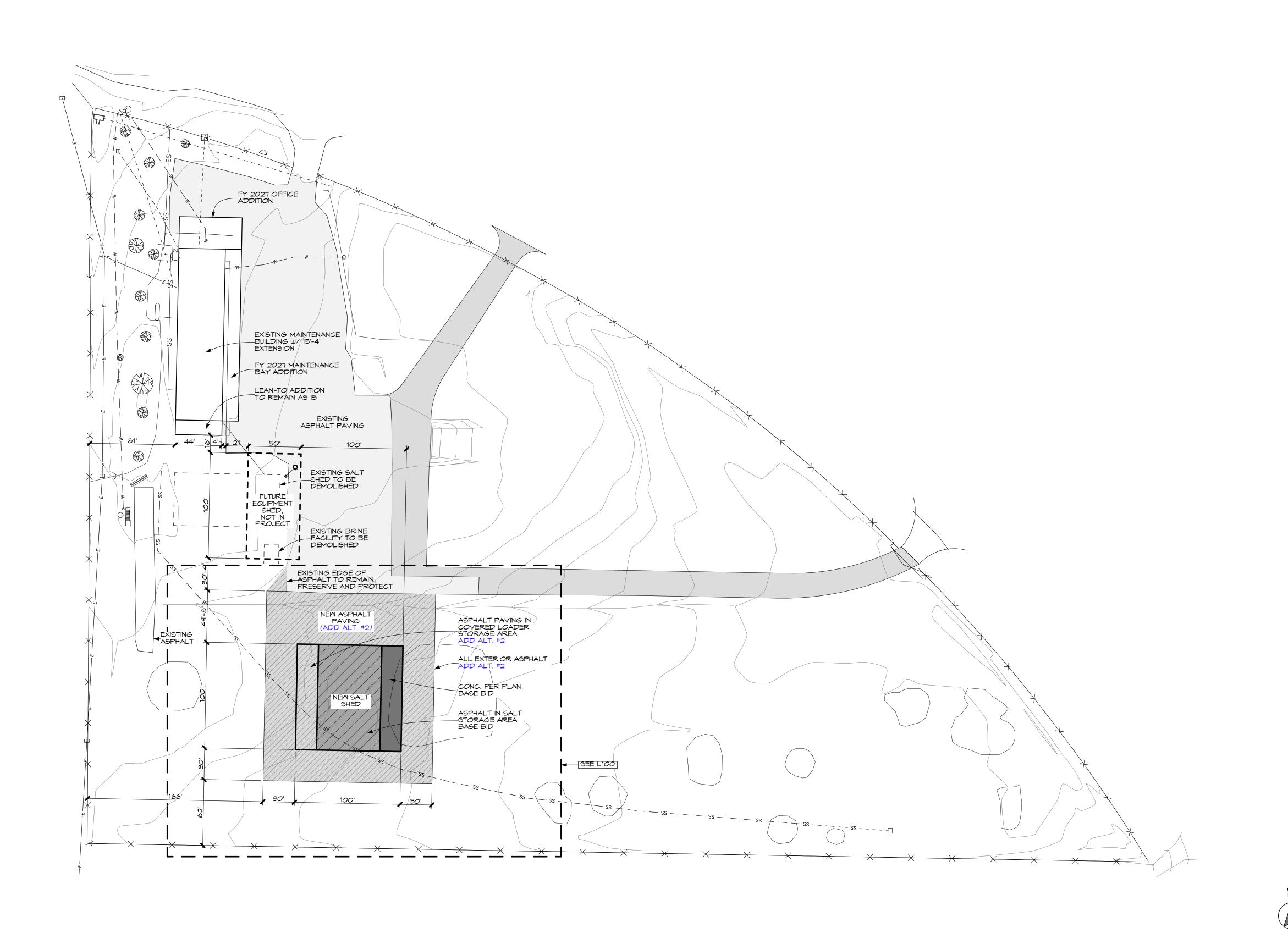
PROJECT March 2023

SHEET G101



CODE **REVIEW** PLAN w/ F.E.C. **DETAILS** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE DATE



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4

SHEET TITLE:

OVERALL SITE PLAN

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

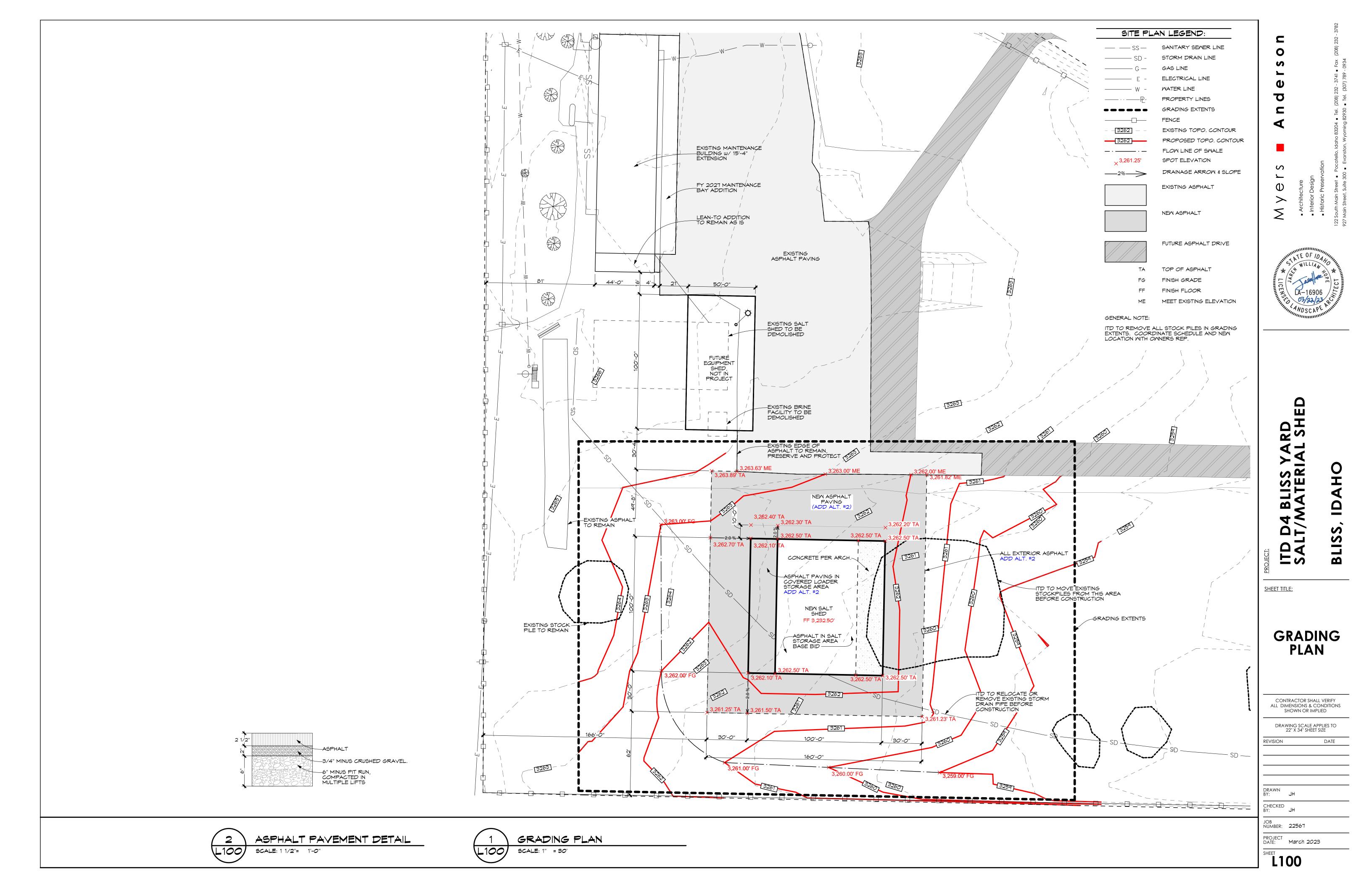
REVISION DATE

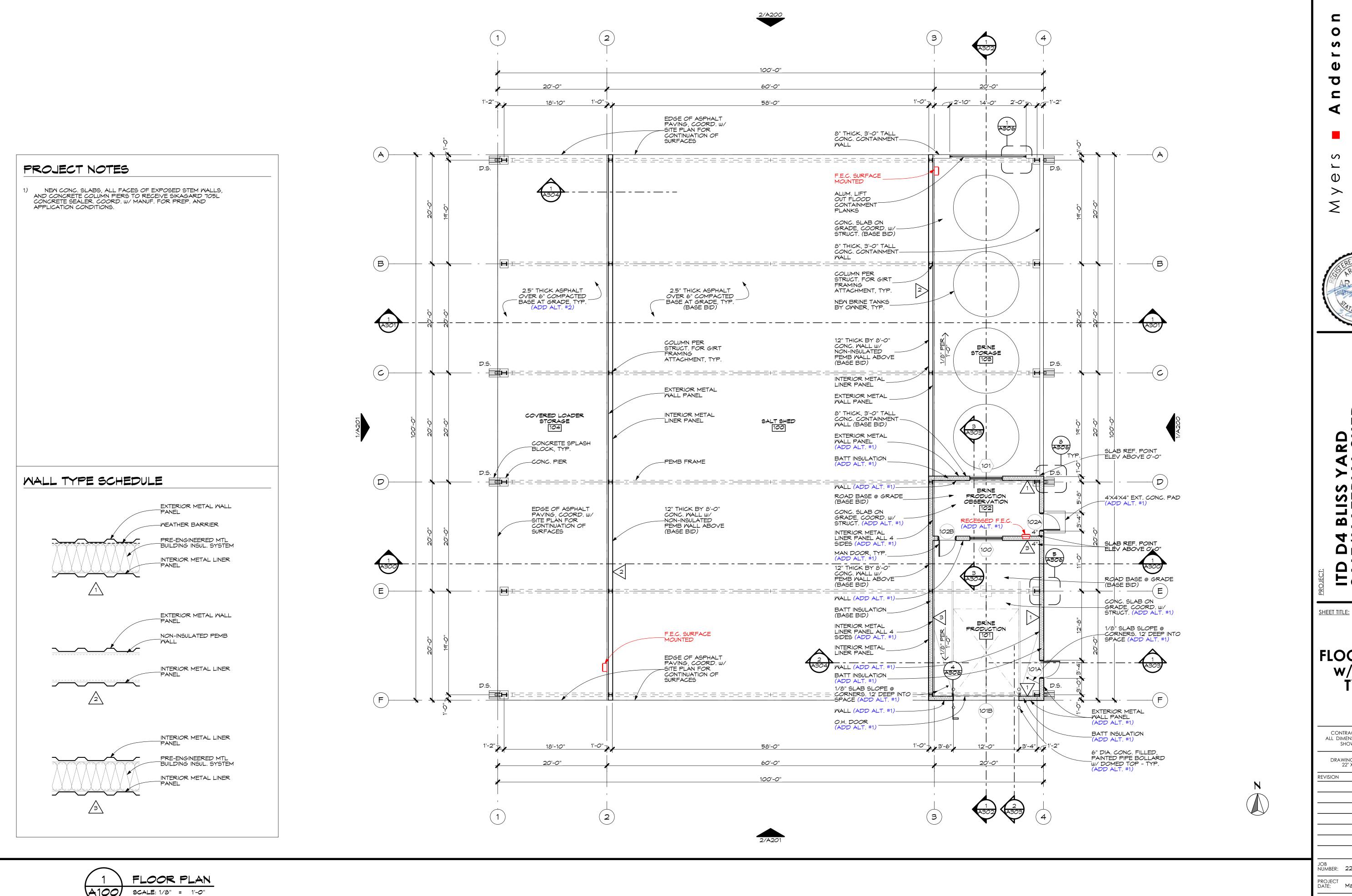
JOB NUMBER: **22566** 

PROJECT DATE: March 2023

SHEET P100

OVERALL SITE PLAN SCALE: 1" = 50'





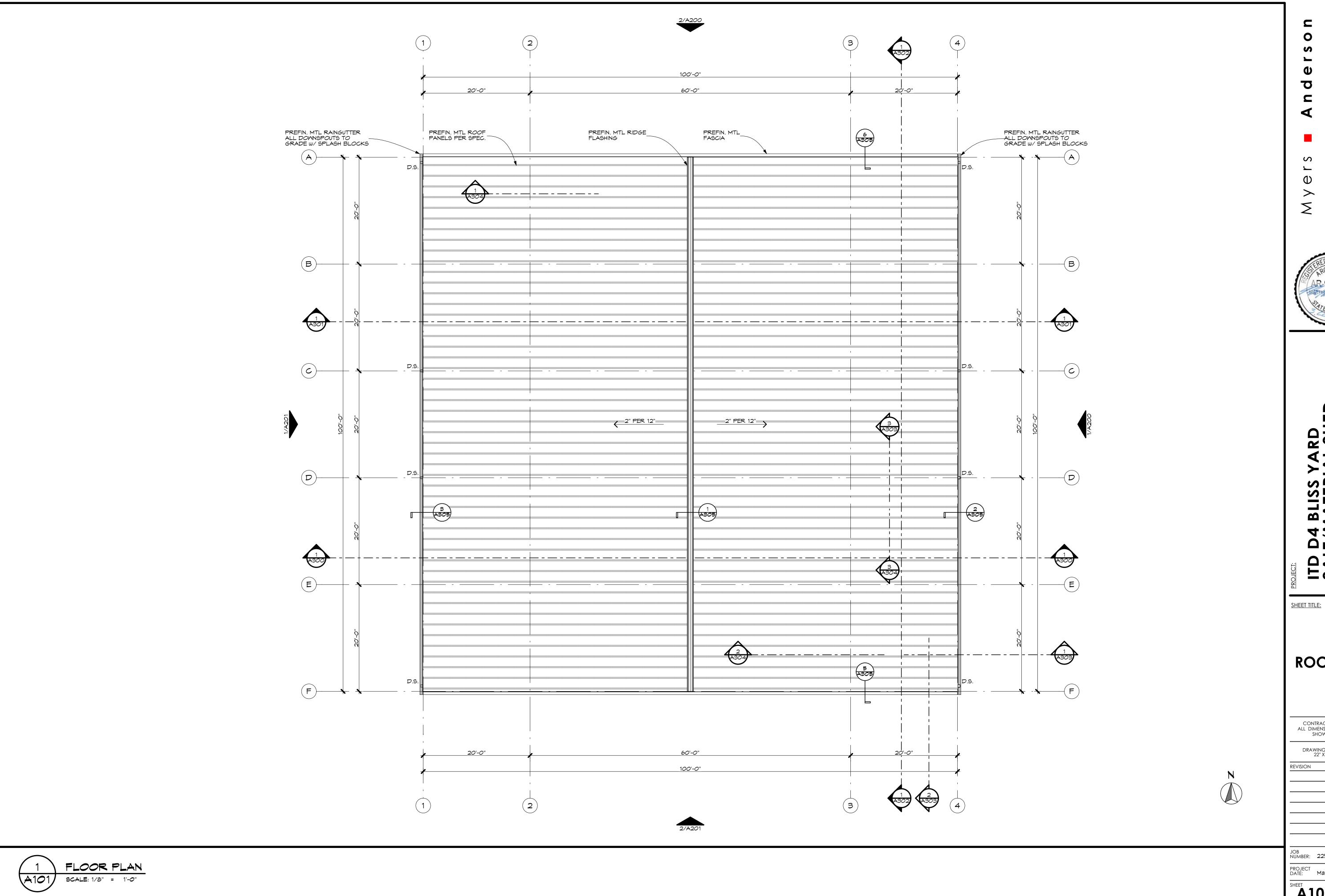
ITD D4 B SALT/M

FLOOR PLAN w/ WALL **TYPES** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE REVISION DATE

JOB NUMBER: 22566 PROJECT DATE: March 2023



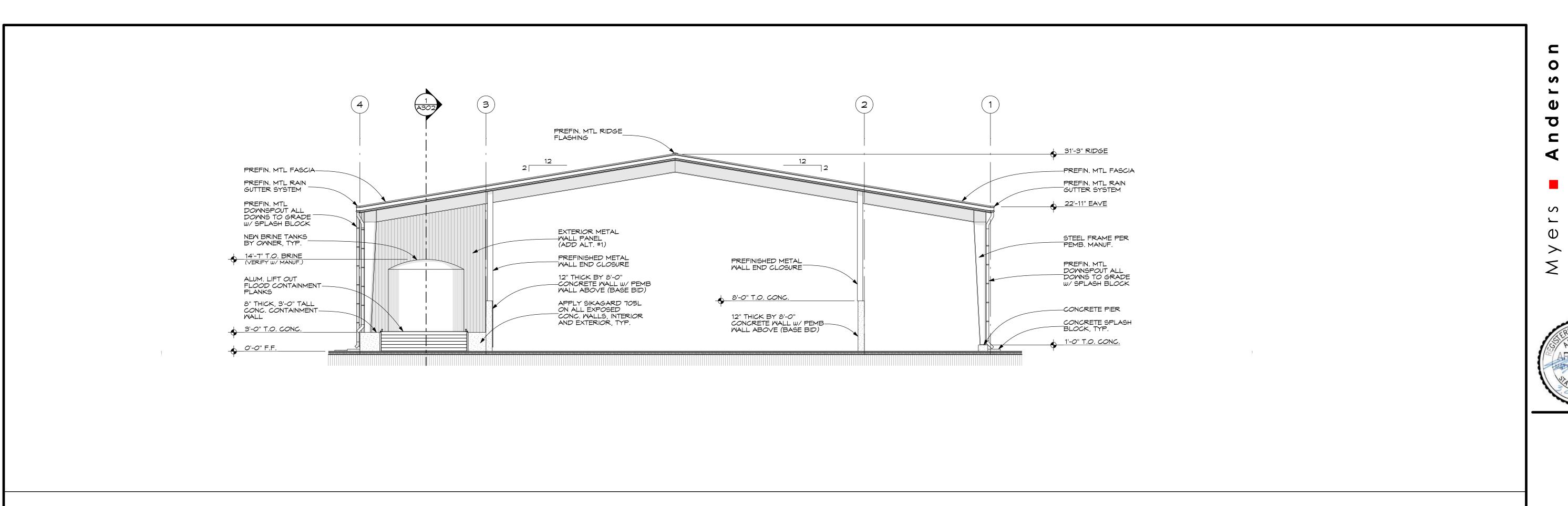
**ROOF PLAN** 

Contractor Shall Verify all dimensions & conditions shown or implied

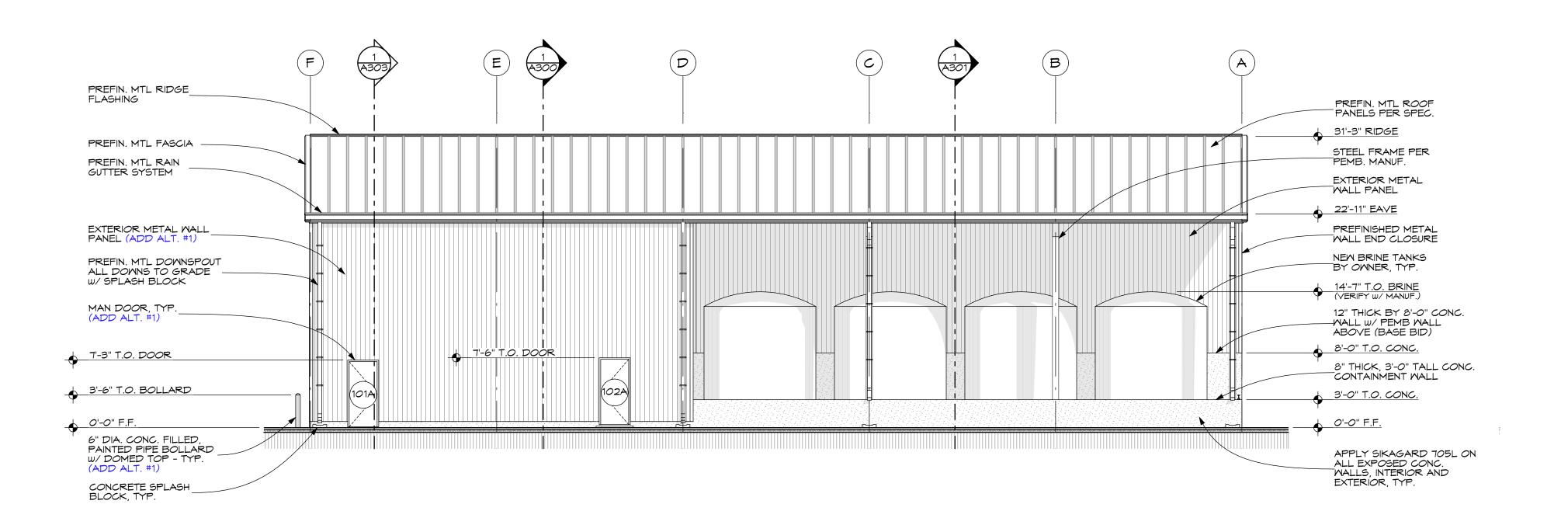
DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

JOB NUMBER: 22566

PROJECT DATE: March 2023







1 EAST ELEVATION A200

SHEET TITLE:

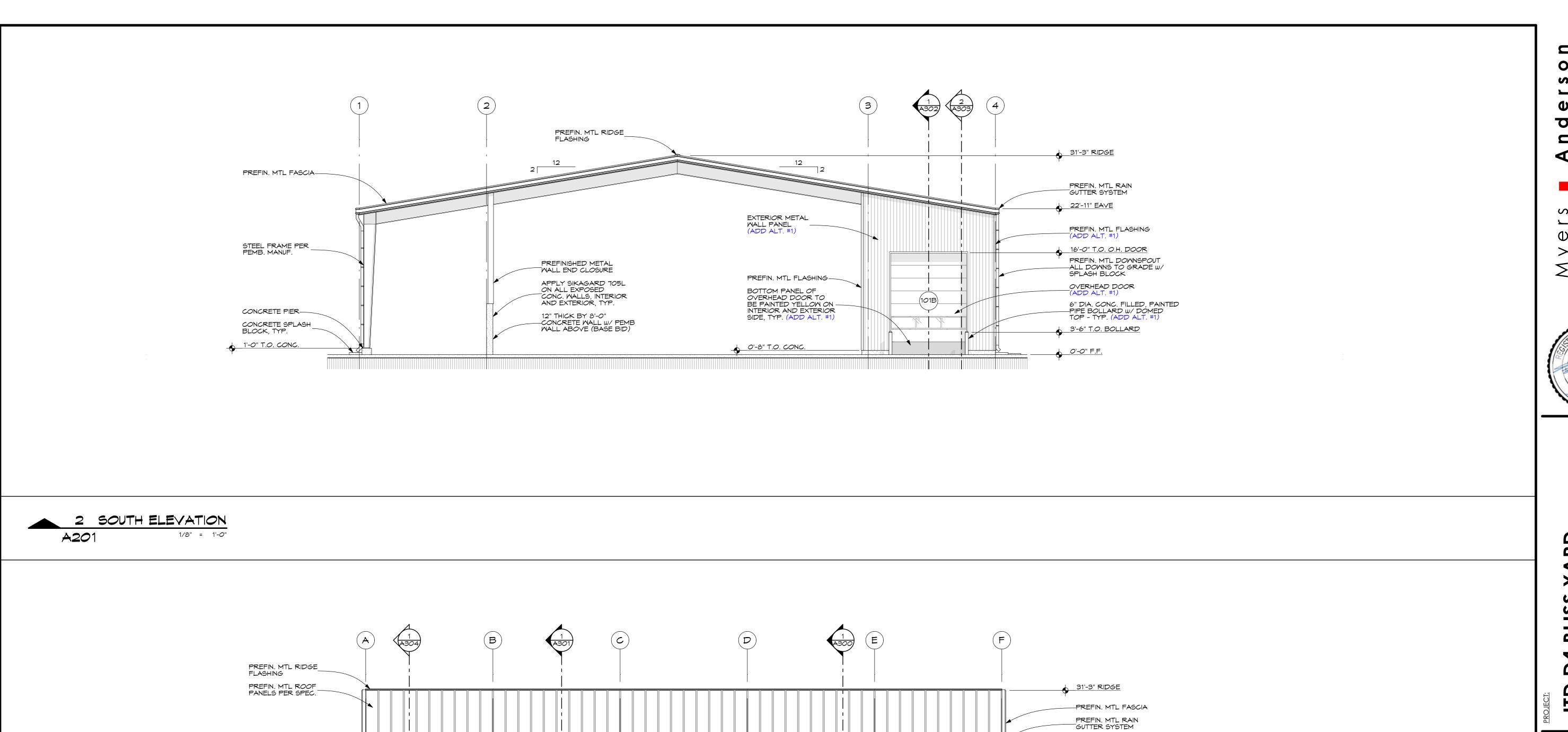
**EXTERIOR ELEVATIONS** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION DATE

JOB NUMBER: 22566

PROJECT DATE: March 2023



22'-11" EAVE

EXTERIOR METAL MALL PANEL

8'-0" T.O. CONC.

3'-6" T.O. BOLLARD

6" DIA. CONC. FILLED, PAINTED PIPE BOLLARD W/ DOMED TOP - TYP. (ADD ALT. #1)

0'-0" F.F.

PREFINISHED METAL WALL END CLOSURE

APPLY SIKAGARD 705L ON ALL EXPOSED

CONC. WALLS, INTERIOR
AND EXTERIOR, TYP.

SHEET TITLE:

**EXTERIOR ELEVATIONS** 

Contractor shall verify all dimensions & conditions shown or implied DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION

DATE

JOB NUMBER: 22566 PROJECT DATE: March 2023

A201

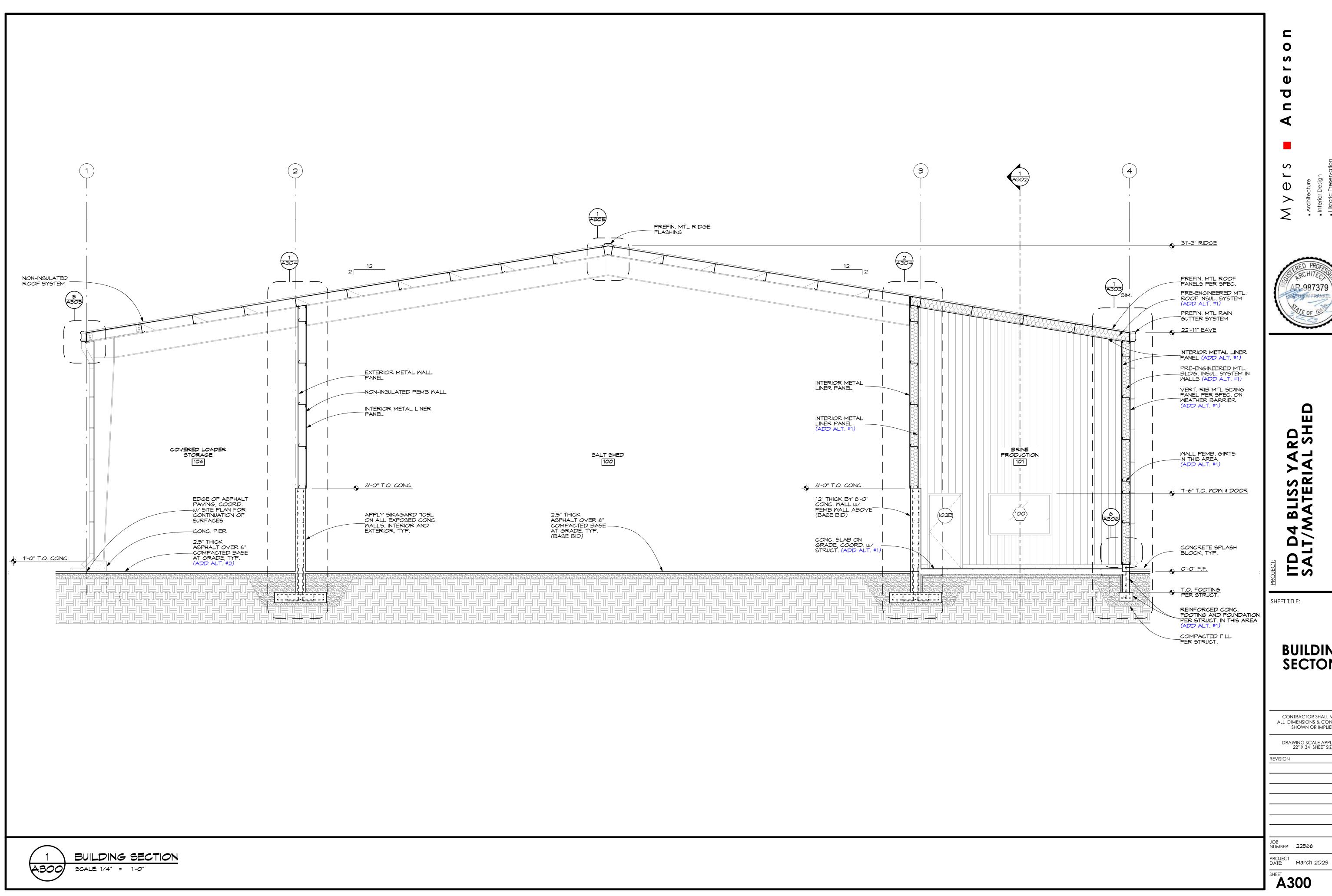
1 WEST ELEVATION A201

STEEL FRAME PER \_ PEMB. MANUF.

12" THICK BY 8'-0" CONC. WALL W/ PEMB WALL ABOVE (BASE BID)

CONCRETE SPLASH\_ BLOCK, TYP.

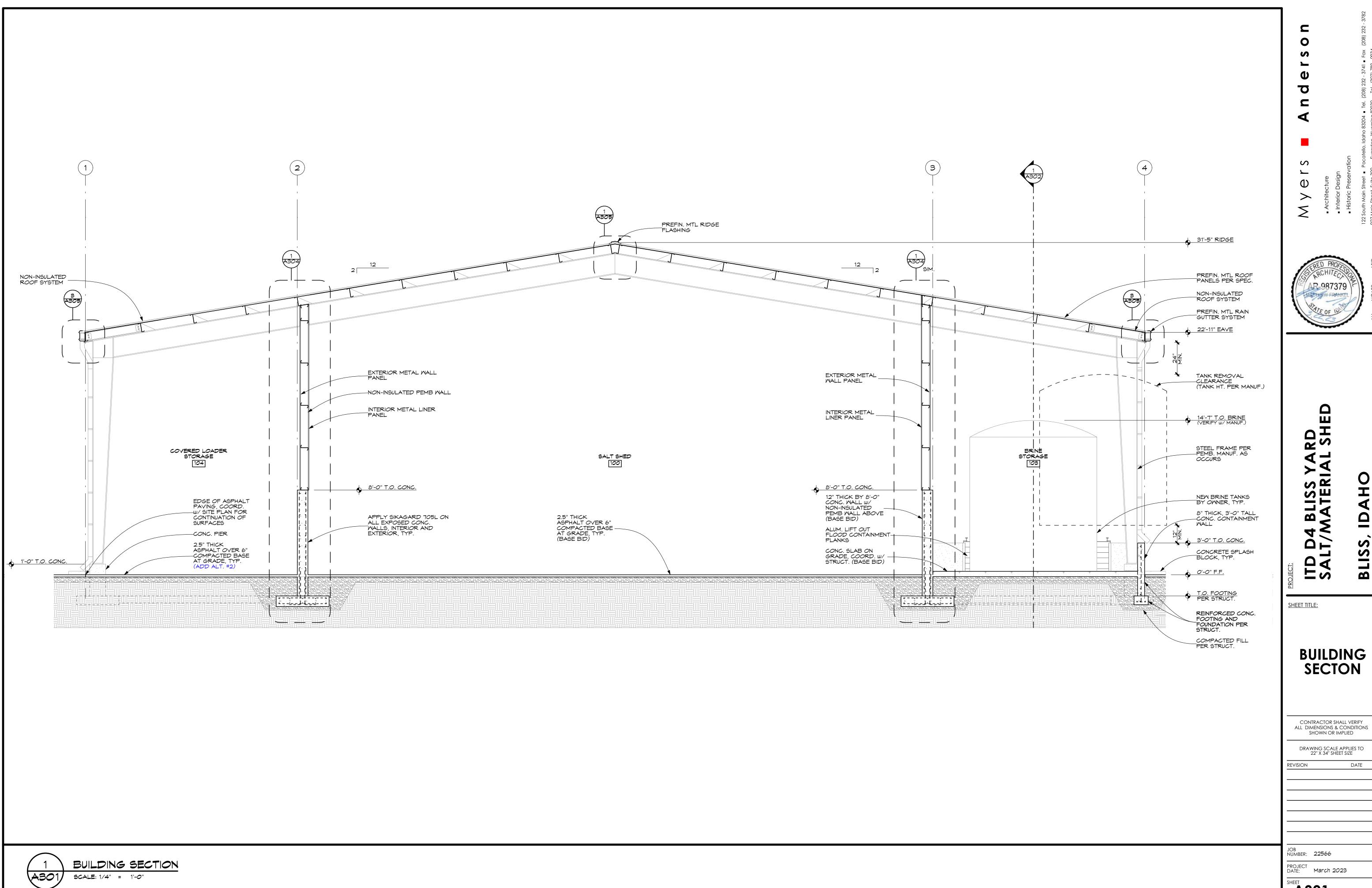
1'-0" T.O. CONC.



**BLISS**,

BUILDING SECTONS

Contractor Shall Verify all dimensions & conditions shown or implied DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE DATE

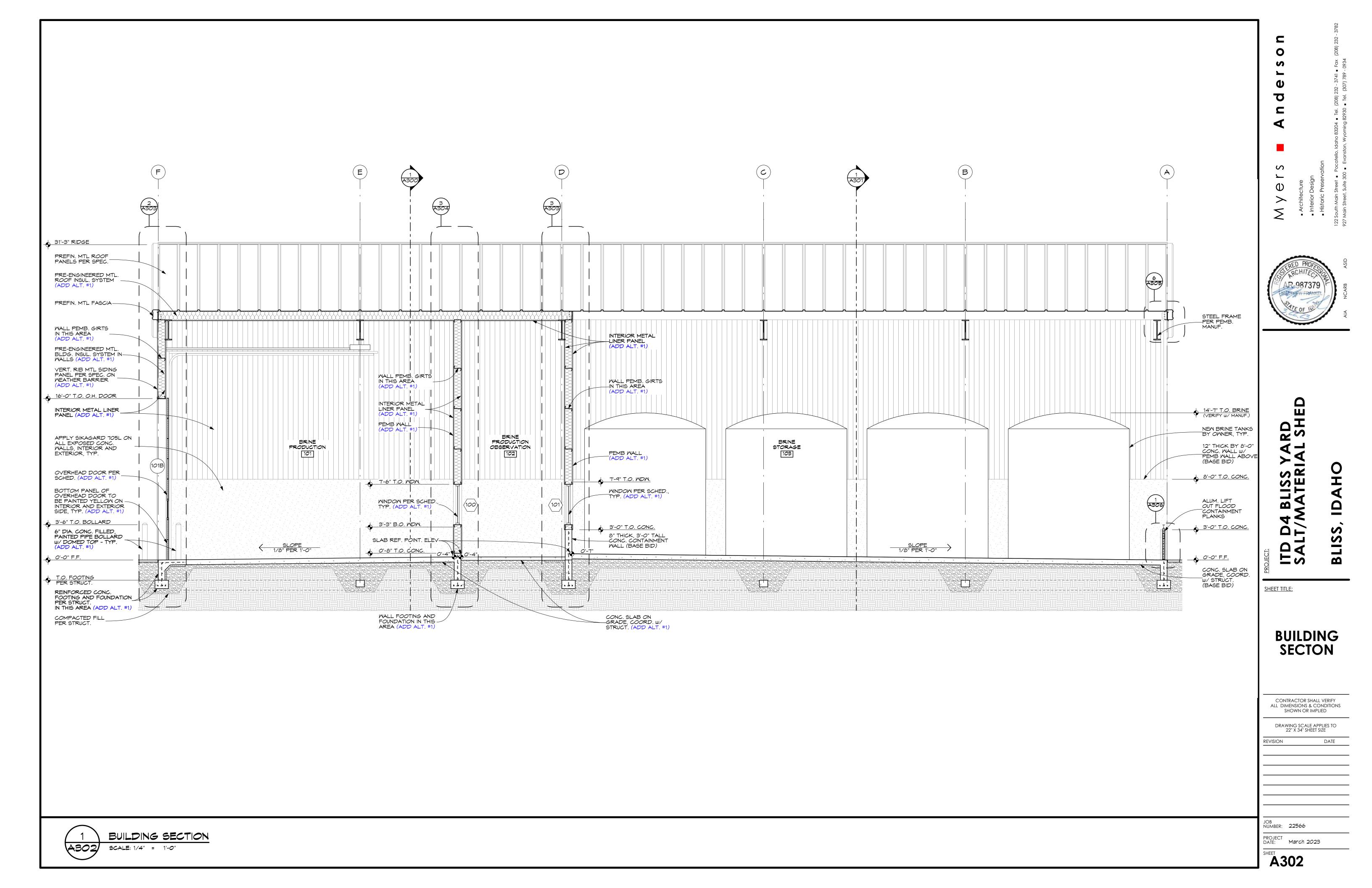


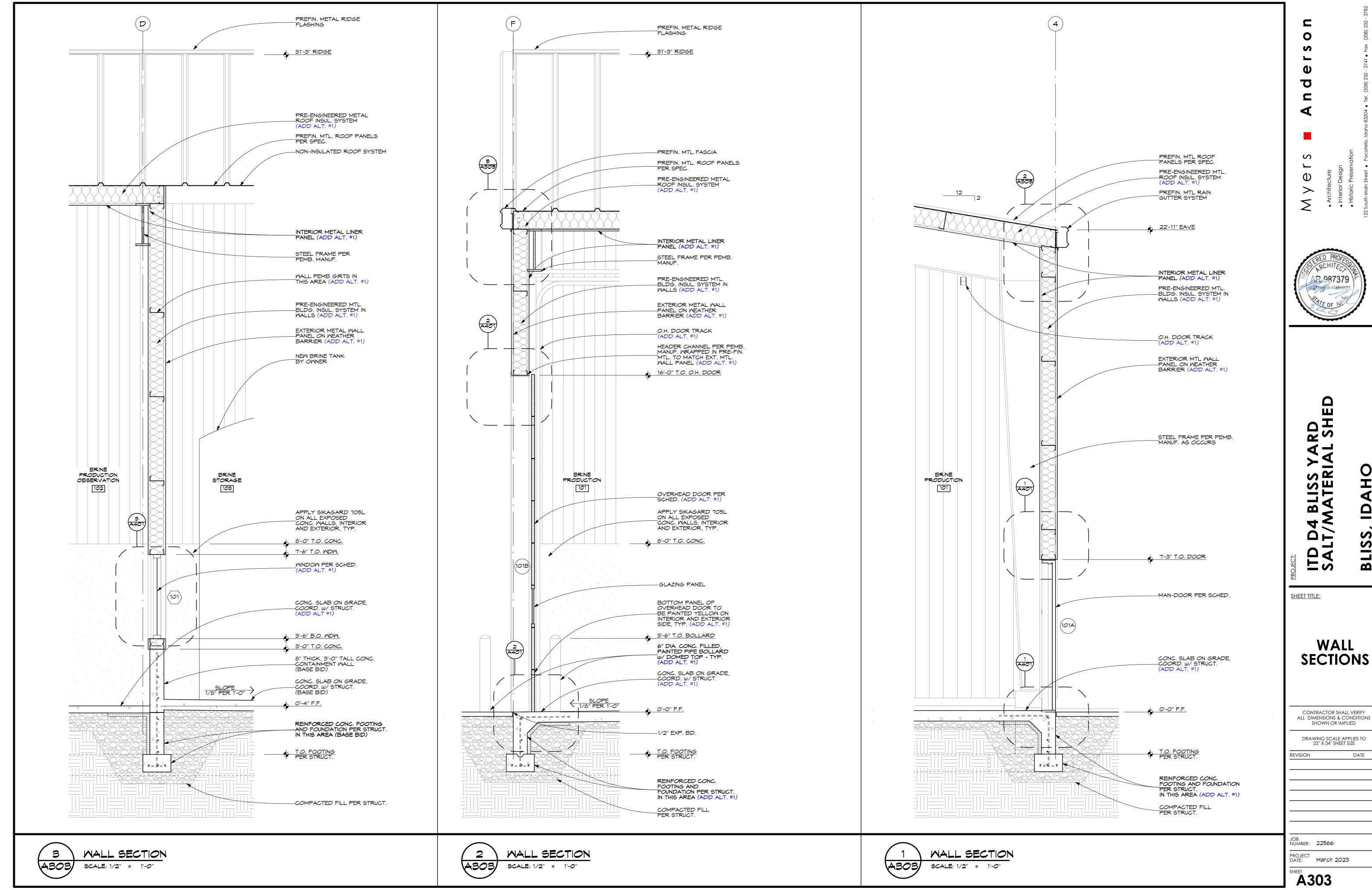
4 BLISS YARD 'MATERIAL SH

BLISS,

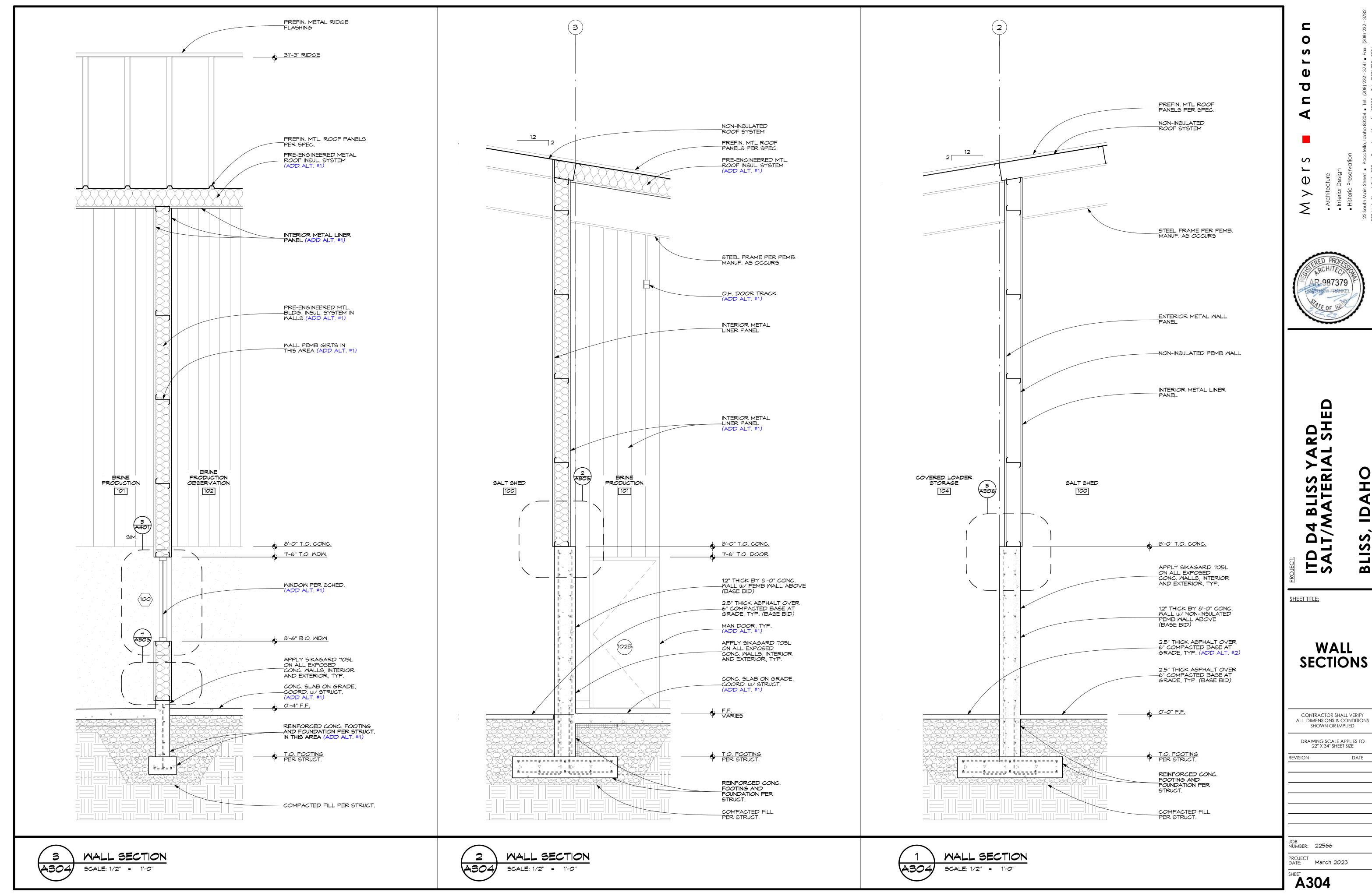
Contractor Shall Verify all dimensions & conditions shown or implied

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE DATE

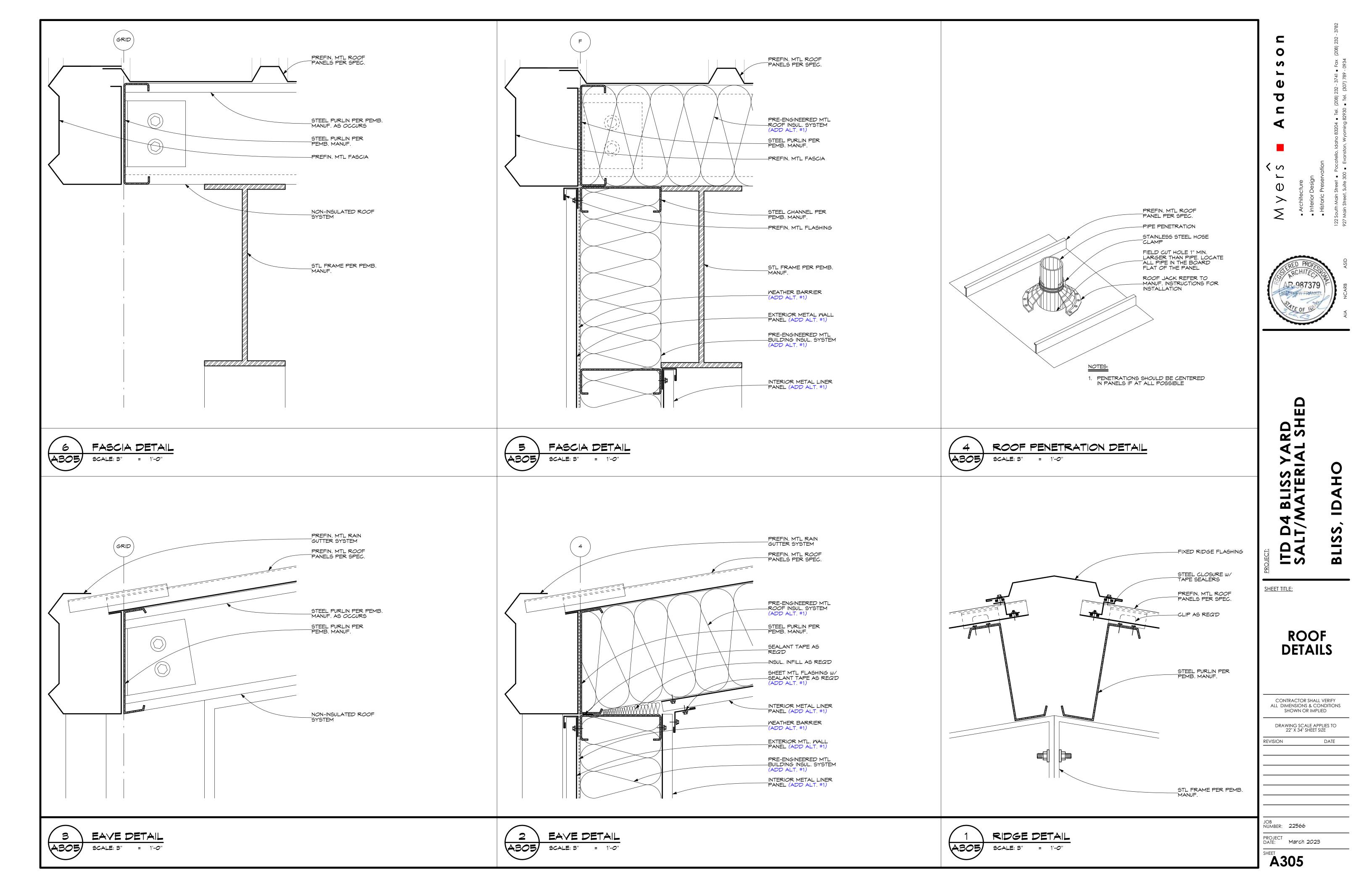


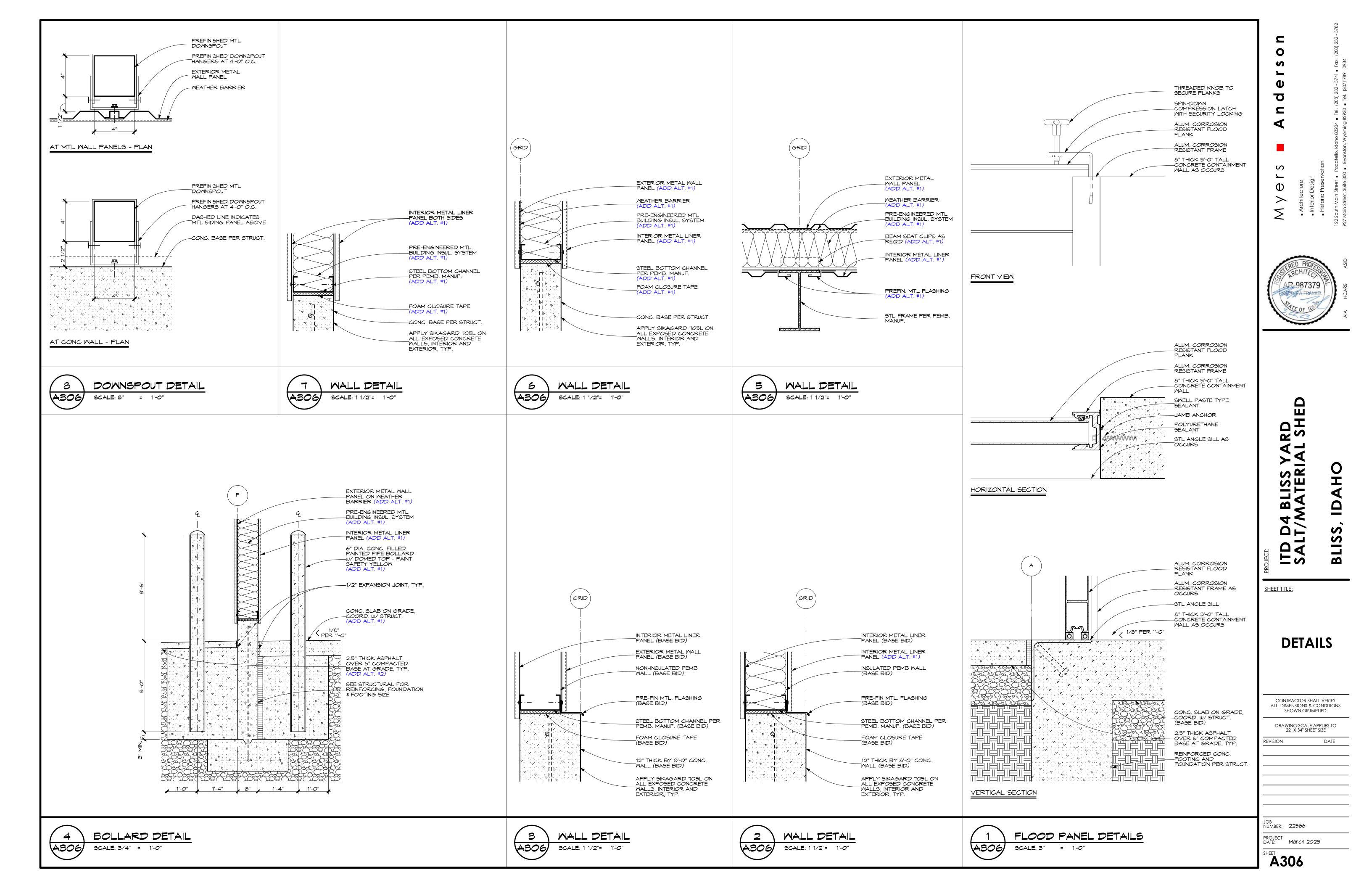


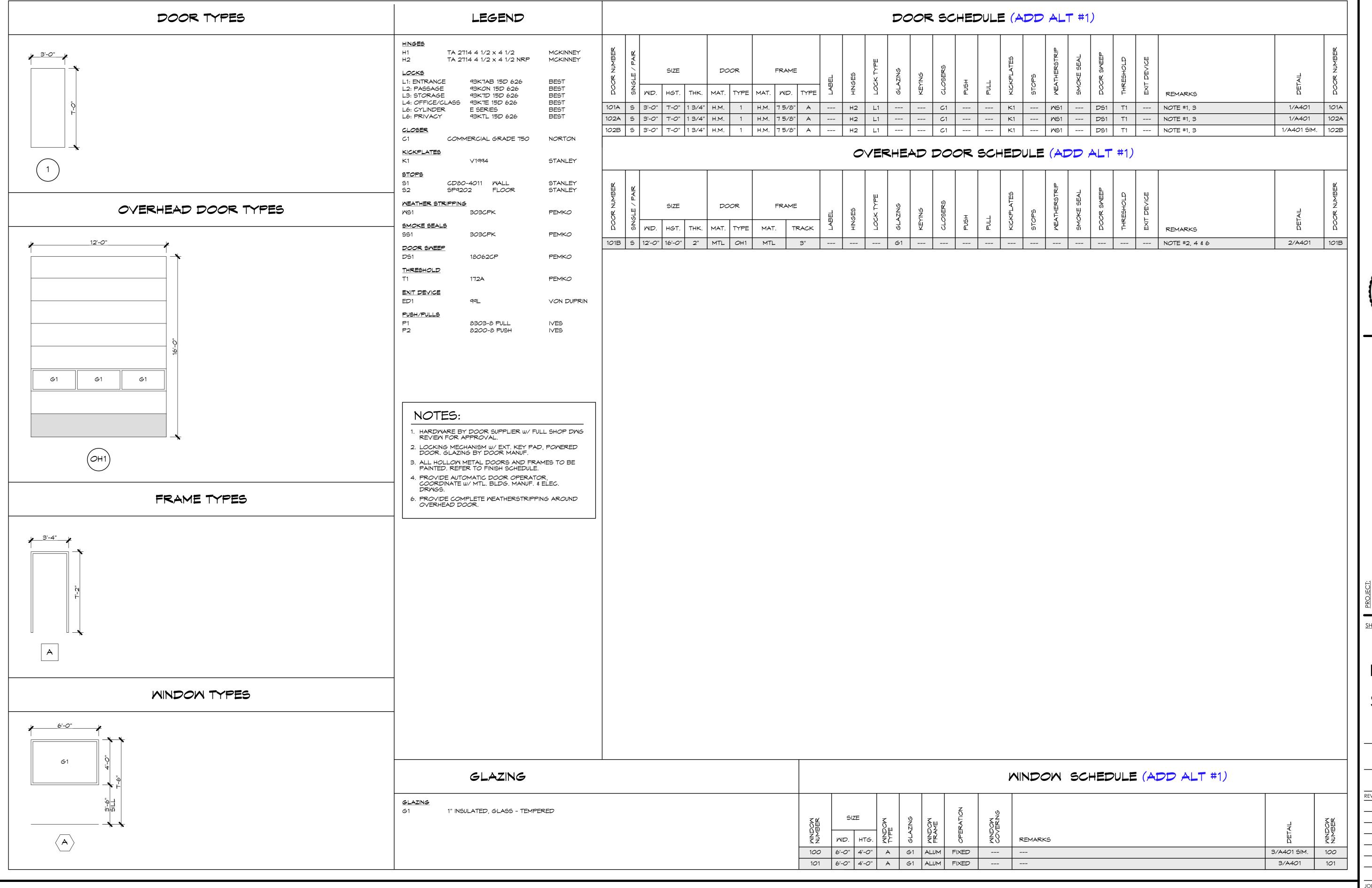
ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE DATE



DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE DATE







DOOR AND WINDOW TYPES & SCHEDULES

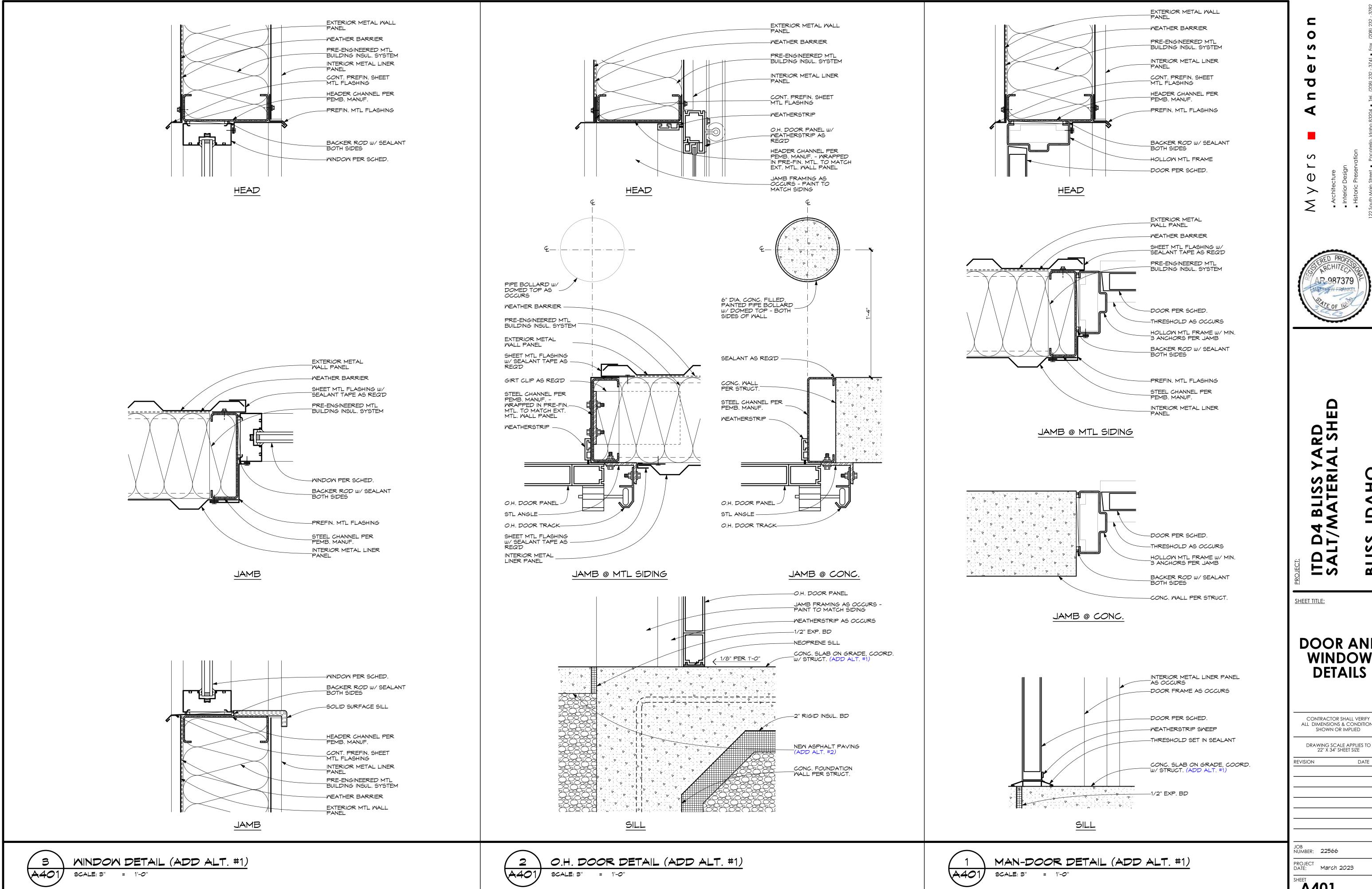
A400

SHEET TITLE:

DOOR AND WINDOW **SCHEDULES** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITION SHOWN OR IMPLIED	12
DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE	

PROJECT DATE: March 2023



SA

DOOR AND **WINDOW DETAILS** 

ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE REVISION

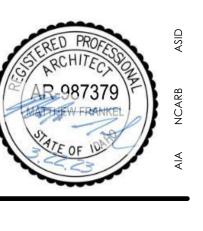
JOB NUMBER: 22566 PROJECT DATE: March 2023

FINISHES		FINISH SCHEDULE																		
FLOOR										W	ALLS						CEILING			
F1 CONCRETE  WALLS	N BER		10 20 10 10		エのテ			EAST	9	50UTH		MEST	N	NORTH						NEW TRANSPORTED TO THE PROPERTY OF THE PROPERT
W1 LINER PANEL W2 VERTICAL RIB METAL SIDING PANEL	Α Ο Σ Σ	ROOM NAME	FLOOR	COLOR #	BASE FII	COLOR #	HOINIGH HOINIGH	COLOR #	IN IN	COLOR #	IN SIGN	COLOR #	HOINIGH HOINIGH	COLOR #	<u>Σ</u>	IN I	COLOR #	НЕІСНТ	REMARKS	Α Ο Σ
CEILINGS	100	SALT SHED	F1	CON-1			M2				M2					C1		VARIES		100
C1 LINER PANEL	101	BRINE PRODUCTION	F1	CON-1			M1		M1		M1		M1			C1		VARIES	COORD. W/ ADD ALT #1	101
	102	BRINE PRODUCTION OBSERVATION	F1	CON-1			M1		M1		M1		M1			C1		VARIES	COORD. W/ ADD ALT #1	102
	103	BRINE STORAGE	F1	CON-1							M2		M2			C1		VARIES		103
	104	COVERED LOADER STORAGE	F1	CON-1			M2									C1		VARIES		104
COLORS																				
FLOOR																				

CON-1 TROWELED CONCRETE, (2) COATS CLEAR SEALER

- ALL PEMB STRUCTURAL STEEL, PURLINS AND WALL CHANNELS TO BE SHOP PRIMED. TOUCH UP IN FIELD WHERE DAMAGED DURING ERECTION
- PAINT ALL HOLLOW METAL DOORS AND FRAMES PER SPECIFICATIONS. COLOR TO BE SELECTED BY ARCHITECT
- 3. PAINT ALL BOLLARDS SAFETY YELLOW
- 4. PAINT BOTTOM PANELS OF ALL OVERHEAD DOORS SAFETY YELLOW
- 5. NEW CONC. SLABS, ALL FACES OF EXPOSED STEM WALLS, AND CONCRETE COLUMN PIERS TO RECEIVE SIKAGARD 705L CONCRETE SEALER. COORD. W/ MANUF. FOR PREP. AND APPLICATION CONDITIONS.

FINISH SCHEDULE



SHEET TITLE:

**FINISH SCHEDULE** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

DATE

JOB NUMBER: **22566** 

PROJECT DATE: March 2023

### **GENERAL REQUIREMENTS:**

MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

- 1. THE STRUCTURAL SYSTEMS AND MEMBERS DEPICTED HEREIN HAVE BEEN DESIGNED. PRIMARILY TO SAFEGUARD AGAINST MAJOR STRUCTURAL DAMAGE AND LOSS OF LIFE, NOT TO LIMIT DAMAGE OR MAINTAIN FUNCTION (IBC SECTION 101.3).
- 2. THESE DRAWINGS, AND THEIR ASSOCIATED STRUCTURAL CALCULATIONS, HAVE BEEN PERFORMED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEER'S IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE INTERNATIONAL BUILDING CODE CONVENTIONAL FRAMING REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR FRAMING ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL
- 3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS USED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, AND SHALL COORDINATE ALL DETAILS.
- 4. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. TYPICAL DETAILS AND NOTES ARE NOT NECESSARILY INDICATED ON THE PLANS. BUT SHALL APPLY NONE-THE-LESS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.
- 5. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT AND STRUCTURAL ENGINEER.
- 6. ANY INSPECTIONS, SPECIAL (IBC CHAPTER 17) OR OTHERWISE THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR BY THESE PLANS SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY OR THE BUILDING. DEPARTMENT, SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.
- 7. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS, THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DRAWINGS SHALL BE FLAGGED UPON HIS REVIEW. VERIFY ALL DIMENSIONS WITH ARCHITECT. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM ORIGINAL CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER THE STRUCTURAL ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY, ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER REGISTERED IN THE APPROPRIATE STATE. THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER ARE NOT TO BE CONSIDERED CHANGES TO ORIGINAL DRAWINGS. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY THE OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY. REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ALLOW (5) WORKING DAYS FOR THE STRUCTURAL ENGINEER'S REVIEW. ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE STRUCTURAL ENGINEER'S RECORDS.

### **BASIS FOR DESIGN:**

1. BUILDING CODE: 2018 EDITION OF THE IBC WITH CITY/COUNTY AMENDMENTS. RISK CATEGORY = II

2. VERTICAL LOADS:

LOCATION	LIVE / SNOW LOAD	DEAD LOAD
ROOF	GROUND = 30 PSF ROOF = 30 PSF (MIN)	PER MANUFACTURER

### 3. DEFLECTION LIMITS:

ELEMENTS	LIVE LOAD	TOTAL LOAD
ROOF TRUSSES/JOISTS	L/240	L/180

### 4. SEISMIC DESIGN PARAMETERS:

ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
IMPORTANCE FACTOR	le = 1.00
SITE CLASS	D
MAPPED SPECTRAL RESPONSE ACCELERATIONS	S <sub>1</sub> = 0.095, S <sub>S</sub> = 0.250

### 5. WIND DESIGN PARAMETERS (STRENGTH):

ULTIMATE WIND SPEED	105 MPH (3 SECOND GUST)
WIND EXPOSURE	С
IMPORTANCE FACTOR	Iw = 1.00

# **FOUNDATION NOTES:**

- 1. IN LIEU OF A GEOTECHNICAL REPORT: THE FOUNDATION HAS BEEN DESIGNED ACCORDING TO THE RECOMMENDATIONS OF CHAPTER 18 OF THE IBC.
- 2. THE SOIL DESIGN VALUES LISTED BELOW HAVE BEEN APPROVED BY THE CITY/COUNTY BUILDING DEPARTMENT, CONTINGENT THAT THE SOIL ON THE SITE PREDOMINATELY CONSISTS OF SAND AND/OR GRAVEL.

SPECIFIC SOIL CLASSIFICATIONS SHOULD BE ONE OF THE FOLLOWING: SANDY GRAVEL OR GRAVEL(GW OR GP), SAND(SW AND SP), SILTY SAND(SM), CLAYEY SAND(SC), SILTY GRAVEL(GM), OR CLAYEY GRAVEL(GC). THESE SOIL CLASSIFICATIONS CAN BE FOUND IN TABLE 1806.2 OF CHAPTER 18 OF THE IBC.

VERIFICATION OF SOIL CLASSIFICATION IS THE RESPONSIBILITY OF THE

THE SOIL DESIGN VALUES FOR THE FOUNDATION ARE:

ALLOWABLE BEARING PRESSURE	1500 PSF
ALLOWABLE LATERAL BEARING PRESSURE	150 PSF/FT
ALLOWABLE LATERAL SLIDING COEFFICIENT	0.25

3. A ONE-THIRD INCREASE IN BEARING PRESSURES IS ALLOWED WITH SEISMIC OR WIND LOAD COMBINATIONS. LATERAL BEARING AND LATERAL SLIDING RESISTANCE MAY BE COMBINED.

### **FOUNDATION BEARING DEPTH**

### 30" BELOW FINISHED GRADE

- 4. ALL FOUNDATIONS SHALL BEAR ON COMPACTED ENGINEERED FILL OR COMPETENT NATIVE SOIL SUBBASE COMPACTED TO 95% DRY DENSITY (STANDARD PROCTOR). GRADE IS DEFINED AS LOWEST ADJACENT GRADE WITHIN 5 FEET OF THE BUILDING FOR PERIMETER FOOTINGS. WHERE EXTERIOR PAVING OR CONCRETE IS DIRECTLY ADJACENT TO BUILDING. GRADE IS DEFINED AS TOP OF EXTERIOR PAVING AT LEAST 5 FEET FROM BUILDING, CONCRETE FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF LOOSE DEBRIS OR UN-COMPACTED MATERIAL AT TIME OF CONCRETE
- 5. CONCRETE SLABS ON GRADE SHALL BE SUPPORTED ON A 4 INCH (MIN) LAYER OF FREE-DRAINING GRANULAR MAT (DRAINAGE FILL COURSE). THE MAT SHOULD CONSIST OF A WELL GRADED SAND AND GRAVEL MIXTURE WITH MAXIMUM 3/4-INCH CRUSHED AGGREGATE. THE GRANULAR MAT SHOULD BE COMPACTED TO NO LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557
- 6. BACKFILL AGAINST RESTRAINED WALLS SHALL NOT BE PLACED UNTIL AFTER THE WALLS ARE SUPPORTED BY THE COMPLETION OF INTERIOR FLOOR SYSTEMS AND CONCRETE OR GROUT STRENGTH HAS REACHED THE 28 DAY STRENGTH LISTED

### REINFORCING STEEL:

- 1. ASTM A615 GRADE 60 (FY = 60 KSI) DEFORMED BARS FOR ALL BARS #4 AND LARGER. ASTM A615 GRADE 40 (FY = 40 KSI) DEFORMED BARS FOR ALL BARS #3 AND SMALLER. GRADE 60 DEFORMED BARS SHALL BE USED FOR CONCRETE WALLS, BEAMS, ELEVATED SLABS AND COLUMN REINFORCING.
- 2. ASTM A775 GRADE 60 (FY = 60 KSI) EPOXY COATED DEFORMED BARS FOR ALL BAR
- 3. WELDING OF REINFORCING BARS SHALL BE MADE ONLY TO ASTM A706 GRADE 60 BARS AND ONLY USING E90 SERIES RODS. WELDING OF REINFORCING BARS SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.
- 4. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

### **GENERAL STRUCTURAL NOTES**

(APPLY UNLESS NOTED OTHERWISE ON PLANS/DETAILS)

### **CONCRETE:**

1. MINIMUM 28 DAY CONCRETE STRENGTH SHALL BE AS FOLLOWS:

USE:	CONCRETE STRENGTH:	MAX W/C RATIO	AIR ENTRAINMENT
FOOTINGS	4000 PSI	0.50	5.5% ± 1%
CONCRETE WALLS	5000 PSI	0.45	5.5% ± 1%
CONCRETE SLABS ON GRADE	5000 PSI	0.40	5.5% ± 1%

- 2. ALL NORMAL WEIGHT CONCRETE SHALL BE REGULAR WEIGHT OF 150 POUNDS PER CUBIC FOOT USING HARD-ROCK AGGREGATES. AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C33.
- 3. LAP SPLICES FOR BEAMS AND FLOOR SLABS SLABS SHALL BE ACCORDING TO CHAPTER 12 OF ACI 318 OR LAP SCHEDULE ON THESE DRAWINGS.

STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. LATEST ACI CODE AND DETAILING MANUAL APPLY. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES.

ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" OR "CLR" ARE TO CENTER OF STEEL. MINIMUM COVER FOR NON-PRESTRESSED CONCRETE REINFORCING SHALL BE AS FOLLOWS:

LOCATION:	MINIMUM COVER	TOLERANCE
CAST AGAINST EARTH (FOOTINGS)	3"	± 3/8"
SLABS ON GRADE	1½"	± 1/4"
EXPOSED TO EARTH OR WEATHER - #5 AND SMALLER	1½"	± 3/8"
EXPOSED TO EARTH OR WEATHER - #6 AND LARGER	2"	± 3/8"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND ROOF SLAB	1"	1/8"
STRUCTURAL SLABS AND WALLS	3/4"	1/8"
BEAMS AND COLUMNS (PRIMARY) REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1½"	3/8"
5 MANUALINA OLLINAD FOR ALL CONCRETE OLIALI, DE CU D		ENIT OLIVALIA

- 5. MAXIMUM SLUMP FOR ALL CONCRETE SHALL BE 6". PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH ALKALINE SOIL, AND TYPE II ELSEWHERE.
- 6. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY.
- 7. CONCRETE PLACEMENT AND QUALITY SHALL BE PER RECOMMENDATIONS IN ACI 614, ACI 301 AND ACI 318, MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND AND UNDER FLOOR DUCTS, ETC. CAST CLOSURE POUR, WHERE SHOWN ON PLANS AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.

ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC., SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE

8. ALL CONCRETE SLABS ON GRADE SHALL BE DIVIDED INTO AREAS BY CONTROL JOINTS (KEYED OR SAW CUT) SUCH THAT ONE SLAB AREA DOES NOT EXCEED A MAXIMUM LENGTH OF 24 TIMES THE SLAB THICKNESS IN BOTH DIRECTIONS (EXAMPLE: 4" SLAB = 8'-0" LENGTH). SQUARE LAYOUTS ARE PREFERRED, BUT THE SLAB GEOMETRY MAY DICTATE OTHERWISE. THE RATIO OF THE LONG TO SHORT DISTANCE SHALL NOT EXCEED 1.3. IT IS RECOMMENDED THAT SAW CUTS BE MADE WITHIN 16 HOURS OF CONCRETE BATCHING.

KEYED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING, ALL OTHER JOINTS MAY BE SAW CUT.

- 9. HORIZONTAL PIPES AND ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE AND SLABS ON GRADE EXCEPT WHERE SPECIFICALLY APPROVED OR NOTED BY THE STRUCTURAL ENGINEER. PIPES AND CONDUITS SHALL NOT IMPAIR THE STRENGTH OF THE WORK.
- 10. FLY ASH MAY BE USED ONLY IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS AND SHALL BE LIMITED TO 18 PERCENT OF CEMENTITIOUS MATERIALS AND SHALL HAVE A REPLACEMENT FACTOR OF 1.2 RELATIVE TO CEMENT REPLACED. NO FLY ASH ADDITIVES SHALL BE USED IN FLATWORK OR ARCHITECTURALLY EXPOSED CONCRETE.
- 11. COLD/HOT WEATHER CONCRETE CONSTRUCTION: PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND 306.
- 12. CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
- 13. LIMIT ALKALI-SILICA REACTION (ASR) TO 0.1% EXPANSION AT 28 DAYS IN CONCRETE MIX AT ALL EXTERIOR CONCRETE AND INTERIOR CONCRETE EXPOSED TO MOISTURE.

### **SPECIAL INSPECTION ITEMS:**

1. THE OWNER OR THE OWNER'S AUTHORIZED AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION ON THE TYPES OF WORK SPECIFIED PER IBC SECTION 1705 AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL. SPECIAL INSPECTIONS ARE REQUIRED AS FOLLOWS:

VERIFICATION AND INSPECTION	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	-	Х
2. REINFORCING BAR WELDING:		
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706;	-	Х
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM $\%_6$ " ; AND		Х
C. INSPECT ALL OTHER WELDS.	Х	
3. INSPECT ANCHORS CAST IN CONCRETE	-	Х
4. INSPECT ANCHORS POST INSTALLED IN HARDENED CONCRETE MEMBERS.		
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		X
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	Х
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	х	-
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	Х	-
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Х
9. INSPECT PRESTRESSED CONCRETE FOR:		
A. APPLICATION OF PRESTRESSING FORCES; AND	Х	-
B. GROUTING OF BONDED PRESTRESSING TENDONS.	X	-
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	Х
11. FOR PRECAST DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR:		
A. INSTALLATION OF THE EMBEDDED PARTS.	x	-
B. COMPLETION OF THE CONTINUITY OF REINFORCEMENT.	Х	-
C. COMPLETION OF CONNECTIONS IN THE FIELD.	Х	-
12. INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5.	-	×
13. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLARS	-	х

### SOILS (IBC TABLE 1705.6) (W/O GEOTECH REPORT)

VERIFICATION AND INSPECTION	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
VERIFY THAT THE IN-PLACE DRY DENSITY OF THE     COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF     THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE     CONTENT DETERMINED IN ACCORDANCE WITH ASTM D     1557.	-	Х
2. VERIFY THAT THE COMPACTED FILL ALLOWABLE BEARING PRESSURE IS NOT LESS THAN 1500 PSF.	-	Х

QUALITY ASSURANCE PROGRAM:

STRUCTURAL SLABS.

14. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS

OF THE CONCRETE MEMBER BEING FORMED.

- A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE STRUCTURAL ENGINEER OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

	ABBREVIATIONS								
A.B.C. — —	— AGGREGATE BASE COURSE	HORIZ — —	— — HORIZONTAL						
A/C — —	— AIR CONDITIONER	K(KIP) — — -	— — 1000 POUNDS						
A.F.F. — —	— ABOVE FINISHED FLOOR	LL	— — LIVE LOAD						
	— ALTERNATE	LBS (#) — — -							
	— ANCHOR BOLT		— – LONG LEG HORIZONTAL						
	— AT (MEASUREMENT)		— — LONG LEG VERTICAL						
	— BEAM		— — MINIMUM						
	BELOW FINISHED FLOOR	MAX	_						
	— BOTTOM OF BEAM	· ' '	— MANUFACTURER('S)						
	— BOTTOM OF DECK		— — MASONRY CONTROL JOINT						
	— BOTTOM OF FOOTING		— — MECHANICAL						
BRG — —			— — NOT APPLICABLE						
	— CONCRETE COLUMN		— — NOT TO SCALE						
	— CAST IN PLACE		— — ON CENTER						
	— CENTERLINE		OUTSIDE FACE OF WALL						
	— CENTERLINE OF BEAM	1	— — OPPOSITE						
	— CENTERLINE OF COLUMN		PRECAST CONCRETE						
	— CENTERLINE OF FOOTING		— — POUNDS PER LINEAR FOOT						
	— CENTERLINE OF WALL		— — PREFABRICATED						
CLR — —			PREFAB FLOOR TRUSSES						
	— CONCRETE		PREFAB ROOF TRUSSES  POUNDS PER SOLUTION						
	— CONCRETE CONTROL JOINT		— — POUNDS PER SQUARE FOOT						
	— CONCRETE SAWCUT JOINT	1	— — POUNDS PER SQUARE INCH						
	— CONCRETE MASONRY UNIT	1 ' '	— PRESSURE TREATED						
	— CONNECTION		REINFORCING     ROOF MOUNTED EQUIPMENT						
	— CONTINUOUS		— — SHORT LEG HORIZONTAL						
	— DEAD LOAD		— — SHORT LEG VERTICAL						
Ø OR DIA. — - DN. — — -	— DOWN	SIM							
	— DOWN — DRAWING(S)		— — SQUARE						
` '	— EDGE OF SLAB		— – STANDARD						
	— EDGE OF SLAB — EQUAL		— — TOTAL LOAD						
	— EQUIPMENT	1	— — TOP OF BEAM						
	— EXPANSION BOLT		— — TOP OF DECK						
	— EXPANSION BOLT  — EXPANSION JOINT		— — TOP OF FOOTING						
	— EXISTING		— — TOP OF LEDGER						
E.W. — —			— — TOP OF MASONRY						
	— FINISHED FLOOR	T.O.P.— —	— — TOP OF PLATE						
	— FACE OF MEMBER		— — TOP OF STEEL						
	— FACE OF STEEL	T.O.W.— —	— — TOP OF WALL						
	— FACE OF WALL	TYP	— – TYPICAL						
	— GAUGE	U.N.O.— —	— — UNLESS NOTED OTHERWISE						
_	— GALVANIZED	VERT							
	— GENERAL STRUCTURAL NOTES	W.W.F. — -	<ul> <li>— WELDED WIRE FABRIC</li> </ul>						
01.5		1 14//	VACITAL						

— — GLUED-LAMINATED BEAM

INSIDE FACE OF WALL

- GIRDER TRUSS

SHEET TITLE:

### GENERAL STRUCTURAL **NOTES**

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

	SHEET INDEX							
SHEET	DESCRIPTION	DETAILS						
S1.0	GENERAL STRUCTURAL NOTES							
S1.1	TYPICAL DETAILS	T-SERIES						
S2.0	FOUNDATION PLAN							
S3.0	FOUNDATION DETAILS	100 - SERIES						

THESE DRAWINGS ARE FOR BID AND APPROVAL ONLY AND ARE NOT FOR CONSTRUCTION. THE FOUNDATION WILL NEED TO BE APPROPRIATELY DESIGNED FOR THE FINAL STEEL BUILDING COLUMN REACTIONS.

PROJECT MANAGER: DBP CAD OPERATOR: RMS

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ructural Engineering

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DRAWN

DATE:

DB

NUMBER: CLJOBNUM

2/13/2023

**DETAILS** 

SHEET TITLE:

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION

DRAWN

DB

CHECKED CB

NUMBER: CLJOBNUM PROJECT 2/13/2023

phone: 208.227.8404 fax: 208.227.8405



- 2. SIDEWALK, PAVEMENT, OR FINISH GRADE 3. SLEEVE, 8"Ø MAX, PROVIDE 1/2" MINIMUM
- CLEARANCE AROUND PIPE-CONDUIT
- 4. CONCRETE WALL, SEE PLAN 5. CONCRETE FOOTING, SEE PLAN 6. COMPACTED SUB-GRADE BELOW FOOTING, SEE PLAN
- 7. PIPE OR CONDUIT

NOTE:

A. NO PIPE SHALL PASS THROUGH

B. MULTIPLE PIPES/CONDUIT SLEEVES ALLOWED PROVIDED SLEEVES ARE

SPACED W/ MINIMUM OF 2x SLEEVE

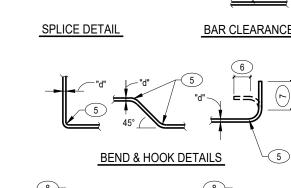
C. SLEEVES SHALL NOT OCCUR WITHIN 12"

OF POINT LOADS OR HOLDOWN ANCHORS

DIAMETER BETWEEN SLEEVES

PLANS AND DETAILS

FOOTINGS OR UNDER COLUMN FOOTINGS. FOR ADDITIONAL INFORMATION SEE



TYPICAL REINFORCING DETAILS

KEYNOTES: 1. LAP - SEE G.S.N. 2. MAXIMUM 1/5 LAP BUT NOT MORE THAN 6"

WIRE TIES 4. 1d (1" MINIMUM)

5. RADIUS = 3d FOR BARS NOT OVER #8; 4d FOR #9, #10, AND #1 BARS; 5d FOR #14 AND #18 BARS, 5d FOR ALL GRADE 40 BARS WITH 180 DEGREE HOOK

6. 4D (4" MINIMUM) 7. 12d (90 DEGREE HOOK)

8. 6d (4" MINIMUM) 9. 135 DEGREE BEND 10. BEND AROUND 1½" PIN FOR #3 BARS. BEND AROUND 2" PIN FOR #4 BARS. BEND AROUND  $2\frac{1}{2}$ " PIN FOR #5 BARS.

FOR CONSTRUCTION ABOVE FOOTING, SEE DETAILS. 4

PIPE PASSING BELOW FOOTING IN DEEP TRENCH

 STEM WALL CONCRETE FOOTING 3. 1'-6" MAXIMUM - WHERE TRENCH EXCEEDS 1'-6" NOTIFY STRUCTURAL ENGINEER

PRIOR TO PLACEMENT OF FOOTINGS 4. BACKFILL AND RECOMPACT TRENCH PER

SOILS REPORT AND SPECIFICATIONS

A. DO NOT UNDERCUT EXISTING FOOTINGS

PASS THRU WALL FOOTINGS OR UNDER

B. NO PIPES OR OTHER UTILITIES SHALL

COLUMN FOOTINGS

KEYNOTES:

1. SLOPED FINISH GRADE

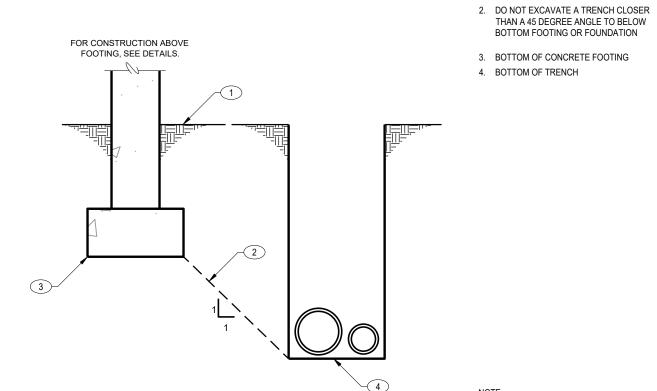
2. MINIMUM FOOTING DEPTH PER G.S.N. - 12"

3. DEEPEN FOOTING AS REQUIRED TO

ACCOUNT FOR SLOPED GRADE

BOTTOM OF TRENCH

KEYNOTES:



A. DO NOT UNDERCUT EXISTING FOOTINGS

KEYNOTES:

1. FINISHED GRADE WHERE OCCURS

B. NO PIPE OR OTHER UTILITIES SHALL PASS THRU WALL FOOTINGS OR UNDER COLUMN FOOTINGS

CONCRETE FOOTING

3. PIPE OR CONDUIT

5. STEM WALL

2. SLEEVE - PROVIDE ½" MINIMUM CLEARANCE AROUND PIPE OR CONDUIT

CONCRETE FILL TO BE PLACED BEFORE FOOTING IS POURED - FORM SAME AS

A. NO PIPE SHALL PASS THRU FOOTING OR UNDER COLUMN FOOTINGS. FOR TRENCHES GREATER THAN 3'-6" BELOW

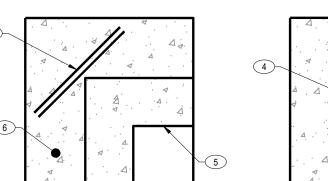
BELOW WALL FOOTING DETAIL.

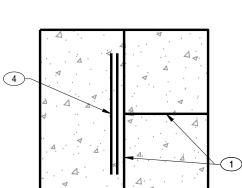
BOTTOM OF FOOTING, SEE PIPE PASSING

FOOTING AND POUR FULL WIDTH OF PIPE

TRENCH PARALLEL TO CONTINUOUS STRAP FOOTING

- 1. CONTROL OR CONSTRUCTION JOINT 2. DEPRESSED CONCRETE SLAB (2) #4x4'-0" BARS AT EACH CORNER OF
- DÉPRESSED SLAB WHERE CONTROL/CONSTRUCTION JOINTS DO NOT EXTEND FROM CORNER 4. (2) #4x4'-0" BARS WHERE CONTROL/CONSTRUCTION JOINTS DO
- NOT CONTINUE BEYOND INTERSECTION 5. EXTERIOR WALL CORNER
- 6. INTERIOR SLAB ON GRADE, SEE PLAN 7. (2) #4x4'-0" AT EXTERIOR WALL CORNER WHERE CONTROL/CONSTRUCTION



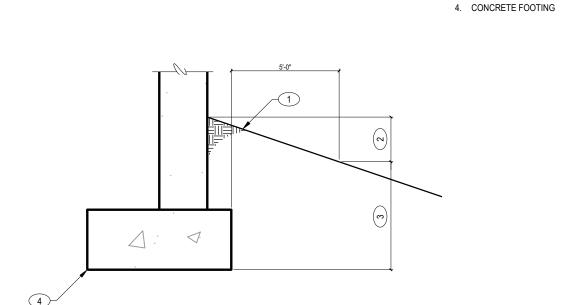


	CLASS B TENSION SPLICE LENGTHS									
BAR SIZE	f'c = 3,0	000 PSI	f'c = 4,0	000 PSI	f'c = 5,000 PSI					
	HOIRZONTAL BARS W/ >12" OF CONC. BELOW	VERTICAL AND BOTTOM HORIZONTAL BARS	HOIRZONTAL BARS W/ >12" OF CONC. BELOW	VERTICAL AND BOTTOM HORIZONTAL BARS	HOIRZONTAL BARS W/ >12" OF CONC. BELOW	VERTICAL AND BOTTOM HORIZONTAL BAR:				
#3	12"	12"	12"	12"	12"	12"				
#4	19"	15"	17"	13"	19"	15"				
#5	29" 23"		26"	20"	30"	23"				
#6	32"	25"	28"	21"	32"	25"				
#7	54"	41"	47"	36"	54"	42"				
#8	70"	54"	61"	47"	70"	54"				
#9	89"	68"	77"	59"	89"	69"				
#10	112"	87"	97"	75"	110"	85"				

BEAM STIRRUPS

- 1. TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
- 2. UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE BEAMS, SLABS AND WALLS SHALL BE CLASS "B" TENSION LAP

TYPICAL DETAIL FOR FOUNDATION EMBEDMENT STEEL REINFORCING LAP SPLICES IN CONCRETE



NOTE:

A. FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS

CONCRETE SLAB ON GRADE

3. SAWCUT 1/8" WIDE x 1/4" SLAB THICKNESS IN DEPTH - CUT SHALL BE MADE SOON

ENOUGH TO PREVENT SHRINKAGE

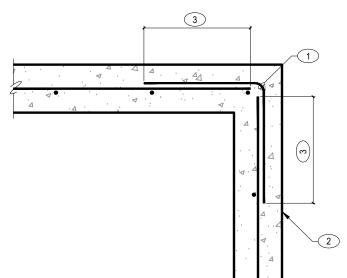
CRACKING, BUT NOT SO SOON AS TO

2. CONT KEYED JOINT

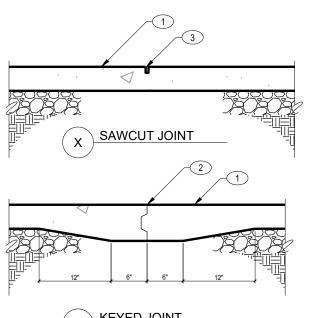
4

PIPE PASSING UNDER WALL FOOTING IN SHALLOW TRENCH

<u></u>



1. CORNER DOWELS TO MATCH HORIZONTAL REINFORCEMENT



CAUSE SPALLING OF THE CONCRETE WHILE SAWING. WORK MUST BE COMPLETE WITHIN 16 HOURS OF CONCRETE PLACEMENT.

> A. KEYED JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT

B. "TOOL WET JOINT", "ZIP STRIP", ETC SHALL MATCH SAWCUT REQUIREMENTS

TYPICAL CONCRETE CORNER

CONTROL JOINTS IN CONCRETE SLAB ON GRADE

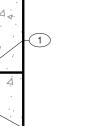
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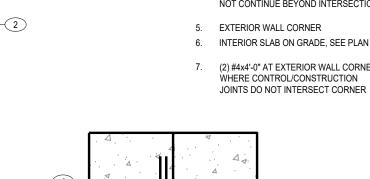
COLUMN REACTIONS.

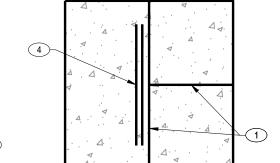
THESE DRAWINGS ARE FOR BID AND APPROVAL ONLY AND ARE NOT FOR CONSTRUCTION. THE FOUNDATION WILL NEED TO BE APPROPRIATELY DESIGNED FOR THE FINAL STEEL BUILDING

TYPICAL PIPE THROUGH STEM WALL

<u>----</u>+-----







LOCATIONS REQUIRING ADDITIONAL SLAB REINFORCEMENT (PLAN VIEW)

UNLESS SPECIFICALLY NOTED ON THE

1020 E. Lincoln Road Idaho Falls, ID 83401 contact@frost-structural.com

2. CONCRETE WALL WITH REINFORCEMENT 3. LAP SPLICE PER TYPICAL STEEL REINFORCING LAP SPLICES IN CONCRETE

	WALL (W) SCHEDULE								
MA	RK	THICKNESS AND TYPE	VERTICAL REINFORCING	HORIZONTAL REINFORCING	REMARKS				
W	<b>V</b> 1	8" CONCRETE	#4 AT 18" O.C. (EPOXY COATED REBAR)	#4 AT 12" O.C. (EPOXY COATED REBAR)					
W	/2	12" CONCRETE	#4 AT 12" O.C. EACH FACE (EPOXY COATED REBAR)	#4 AT 12" O.C. EACH FACE (EPOXY COATED REBAR)					

	FOOTING SCHEDULE								
	<u>OTES:</u> FOR CONSTRUCTION ABOVE FOOTING, SEE DETAILS. FOR MINIMUM CLEARANCE (CLR) OF REINFORCING, SEE GENERAL STRUCTURAL NOTES (GSN).								
MARK LENGTH WIDTH THICKN ESS FOOTING REINFORCING REMARKS									
F48	48"	48"	10"	(4) #4 EACH WAY TOP AND BOTTOM					
WF10	CONT	10"	8"	(2) #4 CONT TOP AND BOTTOM					
WF16	CONT	16"	10"	(2) #4 CONT BOTTOM					
WF60	CONT	60"	12"	(5) #4 CONT AND #4 AT 12" O.C. TRANSVERSE, TOP AND BOTTOM					

	FOUNDATION PLAN NOTES
_	VEDIEVALL DIMENSIONS WITH ALL ADCHITECTURAL

VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS.

. ALL SCHEDULED MARK DESIGNATIONS MAY NOT

WORK. SEE TYPICAL DETAILS FOR ADDITIONAL

NECESSARILY BE FOUND ON THIS PLAN. SCHEDULES ARE TYPICAL TO THIS PROJECT. THE DEPTH OF FOOTING DIMENSION INDICATED IN THE G.S.N. IS A MINIMUM. FOUNDATION CONTRACTOR SHALL COORDINATE WITH THE SOILS REPORT AND OTHER TRADES TO INSURE THAT THESE MINIMUMS ARE SUFFICIENT FOR THE

REQUIREMENTS. . W1, W2, ETC. - AS SHOWN ON PLAN INDICATES CONCRETE OR MASONRY WALLS. SEE WALL SCHEDULE FOR ADDITIONAL

. WF18, WF24, ETC. - AS SHOWN ON PLAN INDICATES A CONTINUOUS WALL FOOTING. SEE WALL FOOTING SCHEDULE

FOR ADDITIONAL INFORMATION. F36, F48, ETC. - AS SHOWN ON PLAN INDICATES A CONCRETE FOOTING. SEE FOOTING SCHEDULE FOR ADDITIONAL

COLUMN FOOTING SIZES ARE PRELIMINARY SIZES TO BE VERIFIED BY STRUCTURAL ENGINEER OF RECORD BEFORE CONSTRUCTION. PRE-ENGINEERED BUILDING MANUFACTURER SHALL SUBMIT DESIGN CALCULATIONS PRIOR TO FABRICATING BUILDING COMPONENTS.
CALCULATIONS SHALL SHOW ALL FOOTING LOAD PER METAL BUILDING MANUFACTURER'S ASSOCIATION "RECOMMENDED DESIGN PRACTICES MANUAL".

### HEADED ANCHOR ROD EMBED SCHEDULE

DIAMETER	MINIMUM EMBEDMENT (FROM TOP OF PIER/WALL)
1/2"	12"
5/8"	14"
3/4"	16"
7/8"	18"
1"	20"
11/4"	25"

PLAN KEYNOTES

SLOPE SLAB (%" PER FOOT) TO CONTAINMENT PLANKS, COORDINATE WITH ARCH DRAWINGS

ADD. ALTERNATE #1: SLOPE SLAB ( $\slash_8$ " PER FOOT) BACK TO FRONT, COORDINATE WITH ARCH DRAWINGS

# CONCRETE SLAB ON GRADE (OFFICE AREA) 6" CONCRETE SLAB ON GRADE W. #4 EPOXY COATED BARS AT 18" O.C. EACH WAY CENTERED IN SLAB THICKNESS PROVIDE SLAB JOINTS PER TYPICAL DETAIL WITHIN 16 HOURS OF BATCH TIME

ADD. ALTERNATE #1

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DESIGNED FOR THE FINAL STEEL BUILDING COLUMN REACTIONS.

tructural Engineering 1020 E. Lincoln Road

phone: 208.227.8404 fax: 208.227.8405 Idaho Falls, ID 83401 contact@frost-structural.com

PROJECT MANAGER: DBP CAD OPERATOR: RMS

**\$2.0** 

FOUNDATION PLAN

ITD D4 BLISS YARD SALT/MATERIAL SHED

SHEET TITLE:

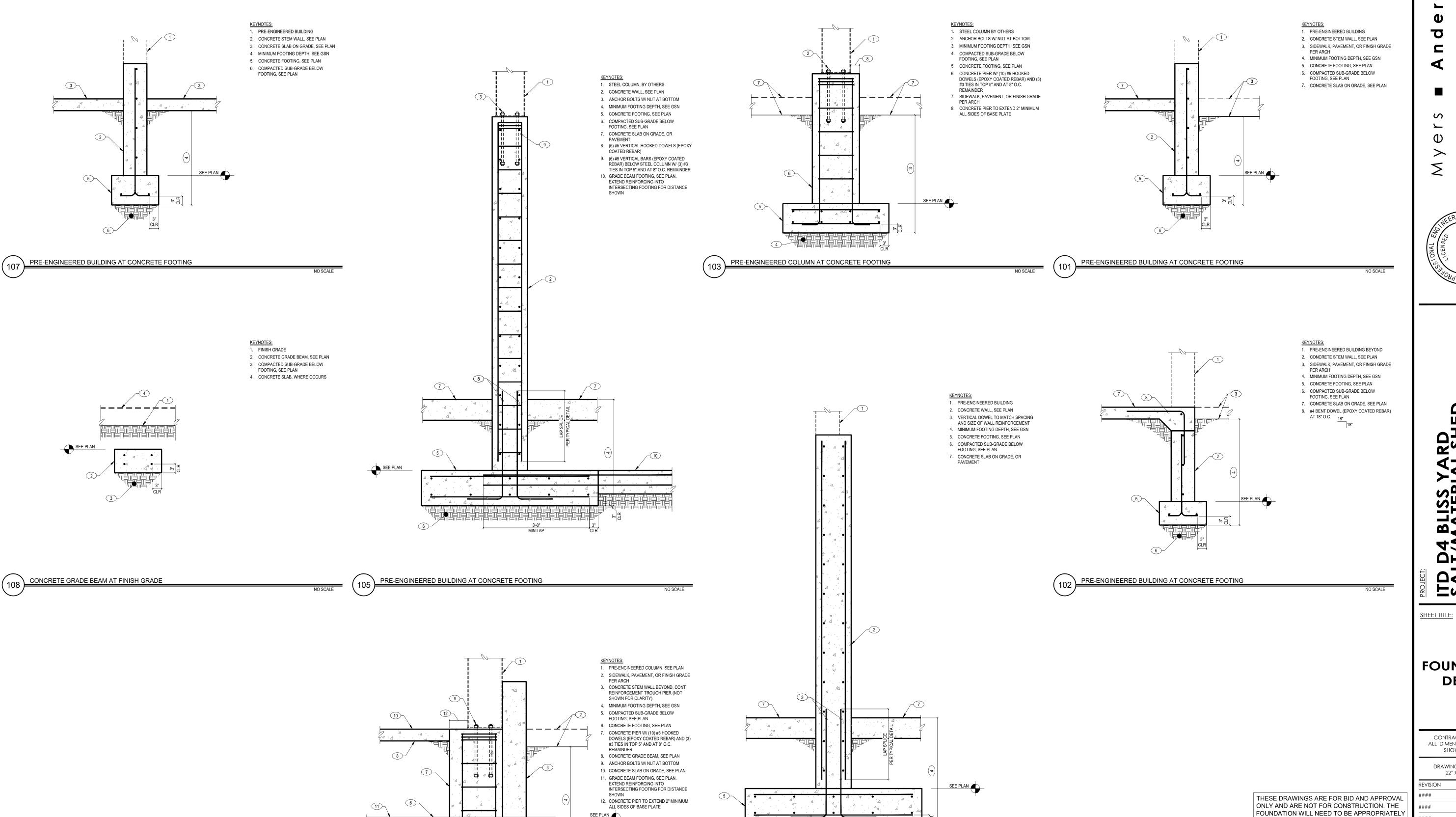
**FOUNDATION PLAN** 

CONTRACTOR SHALL VERIFY

ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

JOB NUMBER: **CLJOBNUM** PROJECT 2/13/2023



PRE-ENGINEERED BUILDING AT CONCRETE FOOTING

PRE-ENGINEERED COLUMN AT CONCRETE FOOTING

**FOUNDATION DETAILS** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO

22" X 34" SHEET SIZE

DRAWN

DESIGNED FOR THE FINAL STEEL BUILDING

PROJECT MANAGER: DBP CAD OPERATOR: RMS

phone: 208.227.8404

fax: 208.227.8405

COLUMN REACTIONS.

JOB NO.: IF23-002

1020 E. Lincoln Road Idaho Falls, ID 83401

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contact@frost-structural.com

tructural Engineering

DB

NUMBER: CLJOBNUM PROJECT 2/13/2023

**S3.0** 

C or AC	AIR CONDITIONING	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	KWH	KILOWATT HOUR
AHU	AIR HANDLING UNIT		
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS	LAT	LEAVING AIR TEMPERATURE
		LAV	LAVATORY
BTU	BRITISH THERMAL UNITS	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
BTUH	BTUS PER HOUR	LWT	LEAVING WATER TEMPERATURE
CA	COMBUSTION AIR	MAX	MAXIMUM
CC	COOLING COIL	MCA	MINIMUM CIRCUIT AMPS
CFM	AIR FLOW RATE (CUBIC FEET PER MINUTE)	MOCP	MAXIMUM OVERCURRENT PROTECTION
CHWR	CHILLED WATER RETURN	MIN	MINIMUM
CHWS	CHILLED WATER SUPPLY		
CLG	CEILING	NC	NOISE CRITERIA
CW	COLD WATER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
		NTS	NOT TO SCALE
	DEGREE	001	OUTOIDE AID
	DIAMETER	OSA	OUTSIDE AIR
DB	DRY BULB	PD	PRESSURE DROP
EA	EXHAUST AIR		PHASE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
	ENERGY EFFICIENCY RATIO	1100	THEOGONE NEBOOMO VALVE
ESP	EXTERNAL STATIC PRESSURE	RA	RETURN AIR
EWT	ENTERING WATER TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
		RTU	ROOFTOP UNIT
FCO	FLOOR CLEANOUT		
	FIRE DAMPER	SA	SUPPLY AIR
FLA	FULL LOAD AMPS	SEER	SEASONAL ENERGY EFFICIENCY RATIO
	FLOOR FEET PER MINUTE	SFD SP	COMBINATION SMOKE/FIRE DAMPER
FPM FT	FEET PER MINUTE	SYM	STATIC PRESSURE SYMBOL
11	LL	STIVI	O I WIDOL
GA	GAUGE	T&P	TEMPERATURE AND PRESSURE
GCO	GRADE CLEANOUT	TEMP	TEMPERATURE
GPM	WATER FLOW RATE (GALLONS PER MINUTE)	TYP	TYPICAL
HC	HEATING COIL	UMC	UNIFORM MECHANICAL CODE
HP	HORSE POWER	UPC	UNIFORM PLUMBING CODE
HVAC	HEATING, VENTILATING, AIR CONDITIONING	URL	URINAL
HW	HOT WATER	\/TD	VENT TUROUCU ROOF
HWR HWS	HOT WATER RETURN HOT WATER SUPPLY	VTR V	VENT THROUGH ROOF VOLTS
IBC	INTERNATIONAL BUILDING CODE	W/	WITH
IEEC	INTERNATIONAL EIRE CODE	WB	WET-BULB
IFC IFGC	INTERNATIONAL FIRE CODE INTERNATIONAL FUEL GAS CODE	WC WCO	WATER CLOSET WALL CLEANOUT
IMC	INTERNATIONAL FOEL GAS CODE	WH	WATER HEATER
IPC	INTERNATIONAL MECHANICAL CODE	LIAA	WATERTIEATER

### MECHANICAL GENERAL NOTES

- 1. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE (IMC) LATEST EDITION, AND ALL LOCAL & STATE CODES.
- 2. ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED PLUMBING CODE, AND ALL LOCAL & STATE CODES.
- ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- 4. MECHANICAL CONTRACTORS SHALL RECEIVE PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER BEFORE MAKING CUTS THROUGH ANY STRUCTURAL MEMBER.
- MECHANICAL CONTRACTORS SHALL COORDINATE INSTALLATION WITH CONSTRUCTION SUPERVISOR AND WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- 6. THE MECHANICAL CONTRACTORS SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWINGS BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
- 7. SEE MECHANICAL SCHEDULE SHEET FOR SCHEDULED CAPACITIES OF ALL MECHANICAL EQUIPMENT AND MATERIALS SPECIFIED.
- 8. DOMESTIC WATER SERVICE IS PROVIDED WITH A REDUCED PRESSURE BACKFLOW PREVENTER.
- 9. ALL MECHANICAL EQUIPMENT TO BE PROPOSED MUST BE ON THE APPROVED LIST PRIOR TO SUBMITTALS. ALL APPROVED MANUFACTURERS MUST BE CAPABLE OF MEETING THE REQUIREMENTS OF THE SPECIFIED EQUIPMENT.
- 10. RUNOUT AND HOOKUP SIZES TO INDIVIDUAL PLUMBING FIXTURE CAN BE FOUND ON THE PLUMBING FIXTURE SCHEDULE.
- 11. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL BACKFLOW DEVICES TO BE INSPECTED BY A CERTIFIED BACKFLOW TECHNICIAN BEFORE THE USE OF THE BUILDING POTABLE WATER SYSTEM.
- 12. LOCATE ACCESS HATCHES SO AS TO PROVIDE OPTIMUM SERVICEABILITY TO EQUIPMENT AND/OR VALVING. SEE ARCHITECTURAL SPECIFICATION FOR TYPE AND COLOR. COORDINATE LOCATION WITH STRUCTURAL & LIGHTING.

MECH	MECHANICAL AND PLUMBING DRAWINGS							
	LEG	END						
T	THERMOSTAT	Ф 🛅	BALL VALVE					
<del></del> #	EQUIPMENT CALLOUT	∫ GCO	GRADE CLEANOUT					
<b>—</b>	DIRECTION OF AIRFLOW	S	DOMESTIC COLD WATER (CW)					
	REDUCED PRESSURE BACKFLOW PREVENTER	11.	VENT-THROUGH-ROOF					
	UNION	<u></u> ⊱	VENT					
<i>5</i> ————————————————————————————————————	CAP	5	SOIL, WASTE, OR SANITARY SEWER					
NOTE:	THIS IS A LIST OF COMMONLY USED MECHANI	' CAL AND PLUMBING SYMBOL	.S. SOME OF THE SYMBOLS SHOWN ABOVE					

### **ENERGY CODE COMPLIANCE**

- COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE IS REQUIRED FOR THIS PROJECT. THESE NOTES COVER MANDATORY REQUIREMENTS OF THE CODE. ADDITIONAL REQUIREMENTS ARE NOTED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
- AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. THE O&M MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION AS A MINIMUM:
  - 1. EQUIPMENT CAPACITY (INPUT & OUTPUT).
  - 2. EQUIPMENT OPERATING AND MAINTENANCE INSTRUCTIONS.
  - 3. CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND
  - 5. A COMPLETE WRITTEN NARRATIVE ON HOW EACH MECHANICAL SYSTEM IS INTENDED TO OPERATE.

ELECTRIC UNIT HEATER SCHEDULE											
SYMBOL AREA SERVED	UNIT TYPE	F.	AN		ELECT	RICAL		OPERATING WEIGHT	MANUFACTURER AND MODEL	REMARKS	
	AREA SERVED	ONIT TIPE	CFM	HP	KW	STEPS	V/Ø	AMPS	(LBS)	INIANOI ACTONEN AND INIODEE	NEIVIANNO
<u>UH-1</u>	BRINE CONTROL B02	SUSPENDED	510	1/30	3.0	1.0	208/1	14.5	50.0	REZNOR MODEL EGHB	1,2,3,4
UH-2	BRINE PRODUCTION B01	SUSPENDED	700	1/30	5.0	1.0	208/1	24.0	50.0	REZNOR MODEL EGHB	1,2,3,4

1. APPROVED ALTERNATE MANUFACTURERS: BRASCH, MODINE, QMARK, & MARKEL.

MAY NOT BE USED IN THIS DRAWING PACKAGE.

- 2. PROVIDE UNIT WITH REMOTE WALLED LINE-VOLTAGE PROGRAMMABLE THERMOSTAT EQUAL TO HONEYWELL MODEL TL8130A, AND 4-POINT SUSPENSION KIT.
- 3. CONTROL BOTH <u>EUH-1</u> & <u>EUH-2</u> WITH ONE THERMOSTAT.
- 4. PROVIDE WITH BID ALTERNATE #1.

**MUSGROVE** ENGINEERING, P.A 234 S. Whisperwood Way Boise, ID 83709 208.384.0585 645 West 25th Street Idaho Falls, ID 83402

208.523.2862 www.musgrovepa.com

SHEET TITLE:

# **MECHANICAL** TITLE SHEET

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION DATE

DRAWN BY:

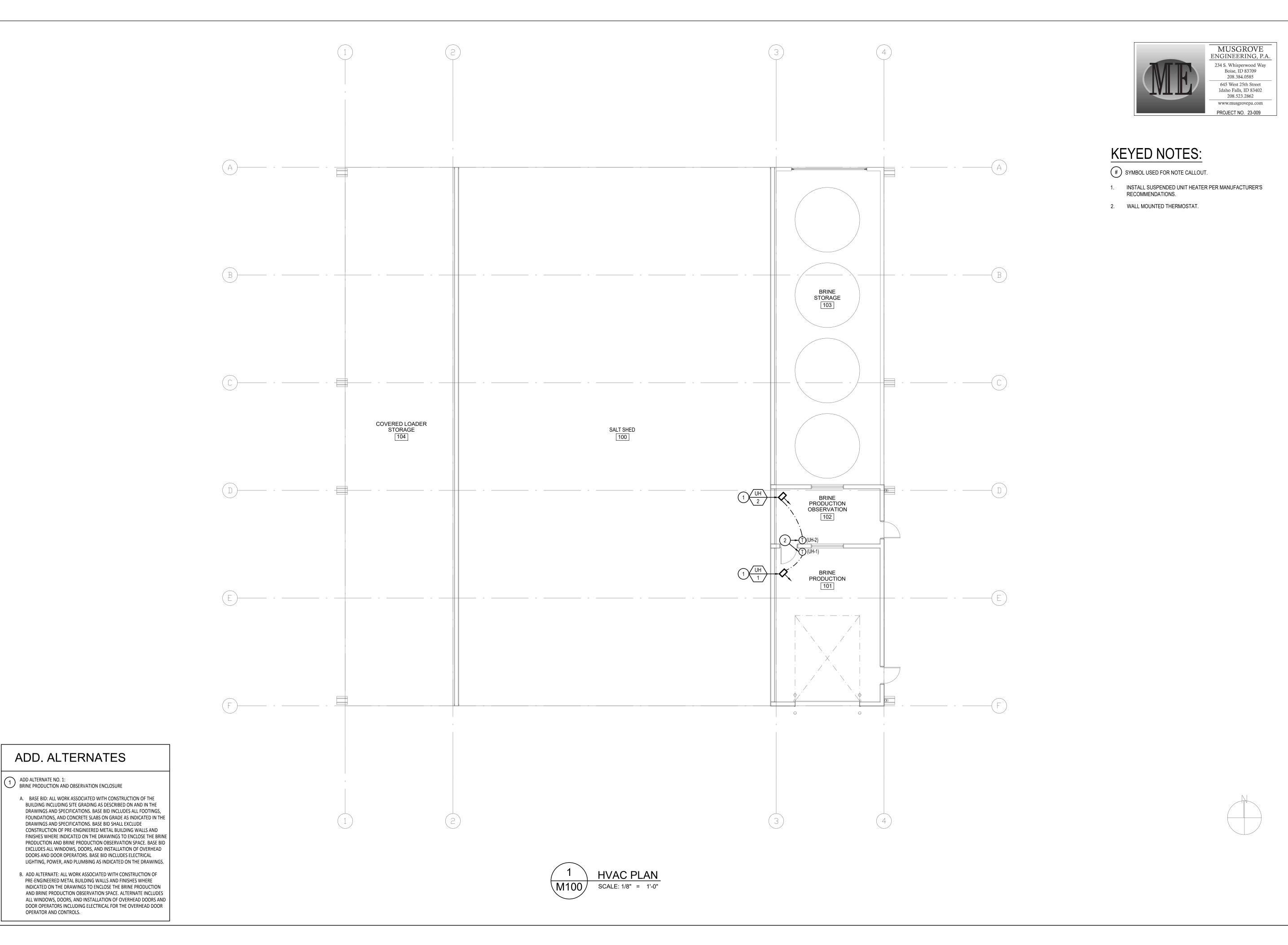
CHECKED BY: TN

JOB NUMBER: 22567

PROJECT DATE: March 2023

### ADD. ALTERNATES

- ADD ALTERNATE NO. 1:
  BRINE PRODUCTION AND OBSERVATION ENCLOSURE
- A. BASE BID: ALL WORK ASSOCIATED WITH CONSTRUCTION OF THE BUILDING INCLUDING SITE GRADING AS DESCRIBED ON AND IN THE DRAWINGS AND SPECIFICATIONS. BASE BID INCLUDES ALL FOOTINGS, FOUNDATIONS, AND CONCRETE SLABS ON GRADE AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. BASE BID SHALL EXCLUDE CONSTRUCTION OF PRE-ENGINEERED METAL BUILDING WALLS AND FINISHES WHERE INDICATED ON THE DRAWINGS TO ENCLOSE THE BRINE PRODUCTION AND BRINE PRODUCTION OBSERVATION SPACE. BASE BID EXCLUDES ALL WINDOWS, DOORS, AND INSTALLATION OF OVERHEAD DOORS AND DOOR OPERATORS. BASE BID INCLUDES ELECTRICAL LIGHTING, POWER, AND PLUMBING AS INDICATED ON THE DRAWINGS.
- B. ADD ALTERNATE: ALL WORK ASSOCIATED WITH CONSTRUCTION OF PRE-ENGINEERED METAL BUILDING WALLS AND FINISHES WHERE INDICATED ON THE DRAWINGS TO ENCLOSE THE BRINE PRODUCTION AND BRINE PRODUCTION OBSERVATION SPACE. ALTERNATE INCLUDES ALL WINDOWS, DOORS, AND INSTALLATION OF OVERHEAD DOORS AND DOOR OPERATORS INCLUDING ELECTRICAL FOR THE OVERHEAD DOOR OPERATOR AND CONTROLS.



OPERATOR AND CONTROLS.

SHEET TITLE:

HVAC **PLAN** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION

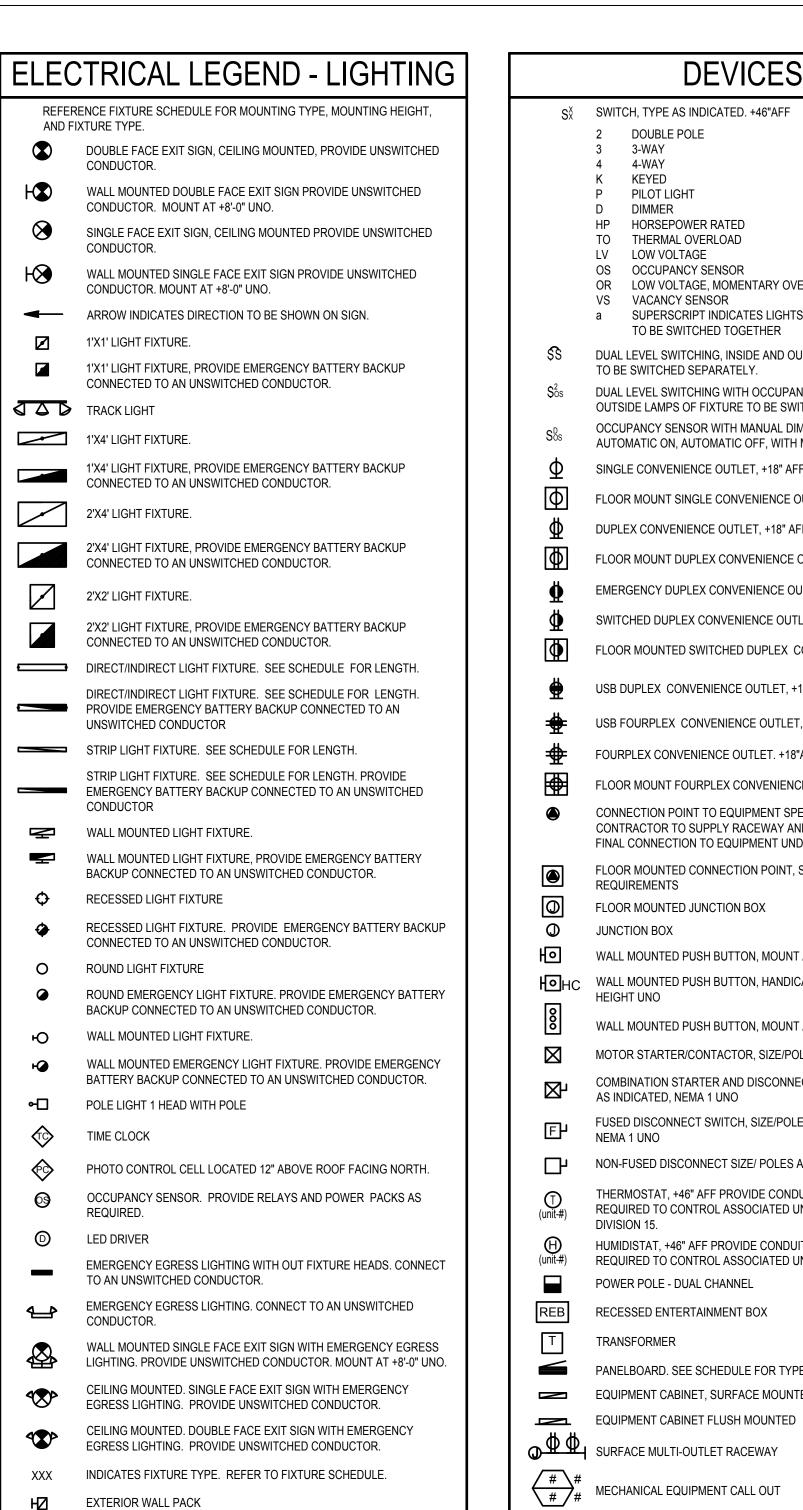
DRAWN BY: CD

CHECKED BY: TN

JOB number: 22567

PROJECT DATE: March 2023

M100



EMERGENCY EXTERIOR WALL PACK. PROVIDE EMERGENCY BATTERY

○ CONDUIT UP

CIRCUITING SYMBOLS

CONCEALED IN

UNDERGROUND

FLOOR OR

BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR

DESIGNATES CIRCUIT ON EMERGENCY SOURCE —

WALL. MAINTAIN CONDUIT AND CONDUCTOR SIZE

CONDUIT DOWN

CONDUIT, STUBBED, CAPPED AND MARKED

WITH PULL CORD AS SPECIFIED

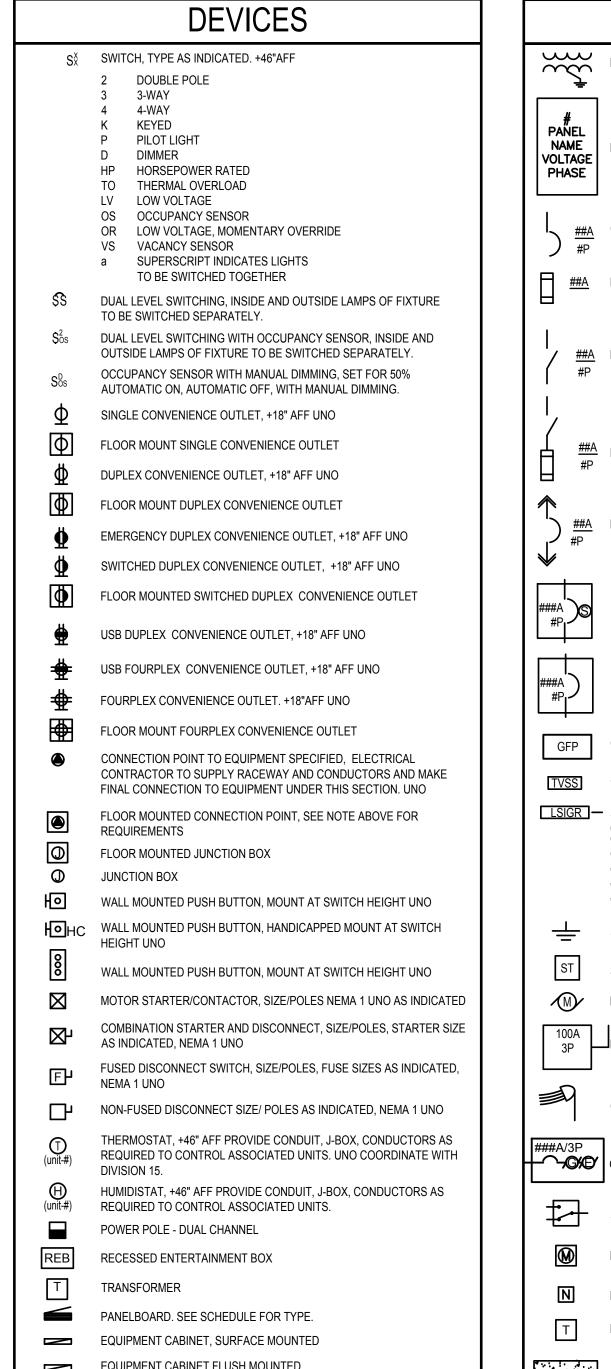
 $\bigcirc -----\bigcirc ----\bigcirc ----\bigcirc ---\bigcirc ---\bigcirc ---\bigcirc$ 

BEGINNING OF INDIVIDUAL CIRCUIT(S), ———

THROUGHOUT ENTIRE CIRCUIT.

CIRCUIT NUMBER(S) INDICATED.

UNMARKED CIRCUIT IS CONCEALED IN CEILING OR ——



KITCHEN EQUIPMENT CALLOUT

PANEL HOMERUN. (3/4"-2#12,1#12G CONDUCTORS UNO)

1"-4#10.1#10G

EDISON STYLE SHARED NEUTRAL CONDUCTORS ARE NOT ALLOWED.

EACH 1 POLE BREAKER SHALL BE FURNISHED WITH AN INDIVIDUAL

DEDICATED NEUTRAL CONDUCTOR.

CURRENT CARRYING

NEUTRAL CONDUCTORS

GROUNDING CONDUCTOR

----- PANEL NAME

— CIRCUIT #

CONDUCTORS

THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL SYMBOLS. SOME NOTE: OF THE SYMBOLS SHOWN MAY NOT HAVE BEEN USED IN THIS DRAWING PACKAGE.

### **ELECTRICAL ABBREVIATIONS**

AMPERES

ONE LINE

PANEL BOARD, SEE SCHEDULE FOR TYPE AND SIZE

CIRCUIT BREAKER, SIZE AND POLES INDICATED

##A INTERRUPTER SWITCH, SIZE AND POLES INDICATED

FUSED SWITCH, SIZE/POLES AND FUSE SIZE INDICATED

DRAW OUT CIRCUIT BREAKER, SIZE AND POLES INDICATED

INDIVIDUAL BREAKER WITH SHUNT TRIP, SIZE AND POLES

INDIVIDUAL BREAKER, SIZE AND POLES INDICATED. NEMA 1 UNO

'R'-ENERGY REDUCING MAINTENANCE SWITCH W/STATUS INDICATOR

DISCONNECT SWITCH, SIZE AND POLES INDICATED. NEMA 1 UNO

GENERATOR SET, MAIN BREAKER SIZE INDICATED

AUTOMATIC TRANSFER SWITCH (ATS)

INDICATED. NEMA 1 UNO

GROUND FAULT PROTECTION

LSIGR — ADJUSTABLE BREAKER SETTINGS

'L'-LONG TIME

'S'-SHORT TIME

GROUND

'I'-INSTANTANEOUS

'G'-GROUND FAULT

SHUNT TRIP COIL

OVERHEAD SERVICE DROP

METER AND BASE

DRY TYPE TRANSFORMER

PAD MOUNT TRANSFORMER

NEUTRAL

(PER SPECIFICATIONS):

TRANSIENT VOLTAGE SURGE SUPPRESSION

FUSE, SIZE AND TYPE INDICATED, PROVIDE FUSE FOR EACH POLE

DELTA WYE TRANSFORMER UNO

VOLTAGE

PHASE

GFP

6" ABOVE BACKSPLASH ABOVE FINISHED FLOOR

AFG ABOVE FINISHED GRADE

AMPS INTERRUPTING CAPACITY **AUTOMATIC TRANSFER SWITCH** AMERICAN WIRE GAUGE

BOTTOM OF DECK

BOTTOM OF STRUCTURE

**CEILING MOUNTED** 

CIRCUIT BREAKER CF COMPACT FLUORESCENT

CKT

CONDUIT ONLY, PROVIDE PULL-LINE CURRENT TRANSFORMER

DEMOLITION DÈMO DEMOLITION

DOUBLE TWIN TUBE

**EMERGENCY** EXISTING **ELECTRICAL CONTRACTOR** 

EMERGENCY LIGHT

FACP FIRE ALARM CONTROL PANEL

GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT INTERRUPTER

HIGH INTENSITY DISCHARGE HAND-OFF-AUTO HIGH PRESSURE SODIUM

HVAC HEATING, VENTILATION, & AIR CONDITIONING

ISOLATED GROUND IPCO IDAHO POWER COMPANY

J-BOX JUNCTION BOX

KVA KILO VOLT-AMP

KWH KILOWATT HOUR

LCP LIGHTING CONTROL PANEL

MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN DISTRIBUTION PANEL MAIN LUGS ONLY

MODULAR METERING CENTER METAL HALIDE MAIN SWITCH BOARD MOUNTING

NORMALLY CLOSED NEC NATIONAL ELECTRICAL CODE NOT IN CONTRACT

NIGHT LIGHT NORMALLY OPEN NTS NOT TO SCALE

OH OVERHEAD OS OCCUPANCY SENSOR

POLES

PHOTO-CONTROL PVC POLYVINYL CHLORIDE PWR POWER

REFERENCE RECEPTACLE RELOCATED

SF SQUARE FEET

TBD TO BE DETERMINED TIME DELAY RELAY

TOE KICK TWISTED SHIELDED PAIR

TRT TRIPLE TUBE TTB TELEPHONE TERMINAL BOARD (TYP.) TYPICAL

UC UNDERCABINET UG UNDERGROUND U.N.O. UNLESS NOTED OTHERWISE

VA VOLT-AMPERE

WG WIRE GUARD WEATHER PROOF/NEMA 3R

PROVIDED/ PROVIDE AND INSTALL / PROVIDED AND PROVIDE BY INSTALLED BY / PROVIDE AND INSTALL INSTALLED/ INSTALL

> THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

# ELECTRICAL GENERAL NOTES

A. THESE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE; THEREFORE, THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL EQUIPMENT AND DEVICE LOCATIONS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DIVISIONS PRIOR TO ROUGH-IN. REFER TO AND COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL WORK THAT IS REQUIRED BY THE ELECTRICAL CONTRACTOR.

ALL CONDUIT AND JUNCTION BOXES ARE TO BE CONCEALED UNLESS LOCATED WITHIN DEDICATED ELECTRICAL OR MECHANICAL ROOMS. USE OF SURFACE MOUNTED RACEWAYS IN ALL OTHER SPACES MUST BE APPROVED BY THE ARCHITECT FOR EACH LOCATION, WHERE SURFACE RACEWAYS ARE APPROVED, UTILIZE WIREMOLD, OR APPROVED EQUAL, SURFACE MOUNTED RACEWAYS PAINTED TO MATCH SURROUNDING WALLS.

REFER TO ARCHITECTURAL ELEVATIONS FOR OUTLET HEIGHTS WHERE THE SPECIFIC OUTLET HEIGHT IS NOT INDICATED. REFER TO THE ELECTRICAL LEGEND FOR THE DEFAULT OUTLET HEIGHT WHEN NOT INDICATED ON ELEVATIONS OR ON AT THE DEVICES.

D. PROVIDE PULL-LINE IN ALL EMPTY CONDUITS.

E. TERMINATE ALL LOW-VOLTAGE CONDUITS WITH INSULATED THROAT BUSHING

MECHANICAL EQUIPMENT INDICATED IS SHOWN IN AN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.

G. CONTRACTOR SHALL COORDINATE WITH AN UNDERGROUND LOCATING SERVICE PRIOR TO COMMENCING WORK. SEE CIVIL DRAWINGS FOR ADDITIONAL SITE INFORMATION. COORDINATE WITH OTHER SITE DISCIPLINES

H. SITE LIGHTING AND UTILITY EQUIPMENT SHOWN IN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS, PROPERTY LINES, AND UTILITY COMPANIES PRIOR TO ROUGH-IN.

REFER TO POLE BASE DETAIL FOR SITE LIGHTING POLE BASE REQUIREMENTS.

ROUTE CONDUITS IN COMMON TRENCH WHERE POSSIBLE REFER TO TRENCHING DETAIL.

# **COMMUNICATIONS**

JUNCTION BOX FOR FUTURE TELEPHONE/DATA OUTLET. MOUNT AT 18" A.F.F. UNO. PROVIDE SINGLE-GANG MUD RING WITH BLANK COVER PLATE. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.

TELEPHONE/DATA OUTLET. MOUNT AT 18" A.F.F. UNO. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. INSTALL QUANTITY OF DATA (#D) AND TELEPHONE (#T) CABLES INDICATED TO THE NEAREST DATA RACK. PROVIDE (2) DATA CABLES IF A CABLE QUANTITY IS NOT

FLOOR MOUNTED BOX FOR FUTURE TELEPHONE/DATA OUTLET. JUNCTION BOX WITH SINGLE-GANG MUD RING. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE. PROVIDE BLANK COVER

FLOOR MOUNTED TELEPHONE/DATA OUTLET. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. INSTALL QUANTITY OF DATA (#D) AND

TELEPHONE (#T) CABLES INDICATED TO THE NEAREST DATA RACK. PROVIDE (2) DATA CABLES IF A CABLE QUANTITY IS NOT INDICATED.

INTERCOM SYSTEM CALL BUTTON. +46" UNO.

CEILING MOUNTED SPEAKER WITH BACKBOX

WALL MOUNTED SPEAKER, WITH BACKBOX +80" UNO

VOLUME CONTROL, +46" UNO

TELEVISION OUTLET, +18" AFF UNO. PROVIDE 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE

CEILING MOUNTED TELEVISION OUTLET

TELEPHONE TERMINAL BOARD

CABLE TRAY, 4" DEEP, WIRE BASKET STYLE, 'XX' INDICATES WIDTH PROVIDE ALL FITTINGS AND SUPPORT HARDWARE REQUIRED



**MUSGROVE** ENGINEERING, P.A 234 S. Whisperwood Way Boise, ID 83709 208.384.0585 645 West 25th Street Idaho Falls, ID 83402

208.523.2862 www.musgrovepa.com PROJECT NO. 23-009

13299 3/16/2023

# **∞** ≤

SHEET TITLE:

# **ELECTRICAL** TITLE **SHEET**

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS

SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO

22" X 34" SHEET SIZE

### ADD. ALTERNATES

ADD ALTERNATE NO. 1:
BRINE PRODUCTION AND OBSERVATION ENCLOSURE

A. BASE BID: ALL WORK ASSOCIATED WITH CONSTRUCTION OF THE BUILDING INCLUDING SITE GRADING AS DESCRIBED ON AND IN THE DRAWINGS AND SPECIFICATIONS. BASE BID INCLUDES ALL FOOTINGS FOUNDATIONS, AND CONCRETE SLABS ON GRADE AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. BASE BID SHALL EXCLUDE CONSTRUCTION OF PRE-ENGINEERED METAL BUILDING WALLS AND FINISHES WHERE INDICATED ON THE DRAWINGS TO ENCLOSE THE BRINE PRODUCTION AND BRINE PRODUCTION OBSERVATION SPACE. BASE BID EXCLUDES ALL WINDOWS, DOORS, AND INSTALLATION OF OVERHEAD DOORS AND DOOR OPERATORS. BASE BID INCLUDES ELECTRICAL LIGHTING, POWER, AND PLUMBING AS INDICATED ON THE DRAWINGS.

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JOB NUMBER: 22567

REVISION

DRAWN BY:

CHECKED BY:

**E001** 

PROJECT DATE: March 2023

DATE

**MUSGROVE** ENGINEERING, P.A 234 S. Whisperwood Way

Boise, ID 83709 208.384.0585 645 West 25th Street

Idaho Falls, ID 83402 208.523.2862

www.musgrovepa.com PROJECT NO. 23-009

SHEET TITLE:

TITLE **SHEET** 

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION

DRAWN BY:

CHECKED BY: MNB

JOB NUMBER: 22567 PROJECT DATE: March 2023

**E001** 

**Interior Lighting Compliance Certificate** 

**Project Information** 

2018 IECC Energy Code:

Project Title: ITD D4 BLISS YARD SALT/MATERIAL SHED

Project Type: **New Construction** 

Designer/Contractor: Construction Site: Owner/Agent: Matthew N. Bradley

Musgrove Engineering 645 W 25th St. Additional Efficiency Package(s) Idaho Falls, ID 83402 208-523-2862 mattb@musgrovepa.com

Credits: 1.0 Required 1.0 Proposed High Performance SWH, 1.0 credit

**Allowed Interior Lighting Power** 

Area Category Floor Area (ft2)		Allowed Watts / ft		Allowed Watts (B X C)	
1-MATERIALS SHED (Warehouse)	6621	0.48		3178	
	-	Total Allowed W	/atts =	3178	
Proposed Interior Lighting Power					
A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps Fixture		D Fixture Watt.	E (CXD)	
1-MATERIALS SHED (Warehouse)					
LED 1: A1: 8FT LED STRIP LIGHT: Other:	1	1	72	72	
LED 2: A2: 8FT LED STRIP LIGHT: Other:	1	5	72	360	
LED 3: X2: LED HIGH BAY: Other:	1	10	95	950	

Total Proposed Watts =

Page 1 of 8

### nterior Lighting PASSES: Design 57% better than code

Data filename: P:\Files\2023\23009\CALCS\ELEC\23009 Electrical\_Compliance.cck

### Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title	Signature	Date
Project Title:	ITD D4 BLISS YARD SALT/MATERIAL SHED	Report date: 02/03/23

# **Exterior Lighting Compliance Certificate**

### Project Information

2018 IECC Energy Code: ITD D4 BLISS YARD SALT/MATERIAL SHED Project Title: Project Type: **New Construction** Exterior Lighting Zone 2 (Light industrial area with limited nighttime use (LZ2))

Owner/Agent:

Construction Site:

Designer/Contractor: Matthew N. Bradley Musgrove Engineering 645 W 25th St. Idaho Falls, ID 83402 208-523-2862 mattb@musgrovepa.com

Report date: 02/03/23

Page 2 of 8

### **Allowed Exterior Lighting Power**

Α	В	С	D	E
Area/Surface Category	Quantity	Allowed Watts / Unit	Tradable Wattage	Allowed Watts (B X C)
Pedestrian and vehicular entrances and exits	132 ft of	14	Yes	1848
Loading dock	3100 ft2	0.35	Yes	1085
		Total Tradable Watts (a) =		2933
		Total All	owed Watts =	2933

Total Allowed Supplemental Watts (b) = (a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

### **Proposed Exterior Lighting Power**

A Fixture ID: Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	(C X D)
Pedestrian and vehicular entrances and exits (132 ft of door width): Tradable Wattage LED 2: X1: LED WALL PACK: Other:	1	10	108	1080
Loading dock (3100 ft2): Tradable Wattage LED 1: X2: LED HIGHBAY: Other:	1	15	95	1425
Total Tradable Proposed Watts =		2505		

### Exterior Lighting PASSES: Design 25% better than code

Project Title: ITD D4 BLISS YARD SALT/MATERIAL SHED

Data filename: P:\Files\2023\23009\CALCS\ELEC\23009 Electrical\_Compliance.cck

### **Exterior Lighting Compliance Statement**

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Signature

### **ENERGY CODE COMMISSIONING COMPLIANCE NOTES**

### SECTION 408 SYSTEM COMMISSIONING

IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL BELOW NOTED DOCUMENTS WITHIN 90 DAYS OF CERTIFICATE OF OCCUPANCY:

- AS-BUILT DRAWINGS DRAWINGS SHALL INCLUDE THE LOCATION AND PERFORMANCE DATA OF ALL PIECES OF MECHANICAL EQUIPMENT.

  - LIGHTING CONTROL SYSTEMS MAINTENANCE AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, EQUIPMENT AND SYSTEM SCHEMATICS, AND CONTROL SEQUENCES OF OPERATIONS. DESIRED OR FIELD DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT ALL CONTROL DEVICES, OR FOR DIGITAL CONTROL SYSTEMS, IN THE SYSTEM PROGRAMMING
  - INSTRUCTIONS. 5. A NARRATIVE ON HOW EACH LIGHTING SYSTEM IN INTENDED TO OPERATE, INCLUDING RECOMMENDED SETPOINTS.

FUNCTIONAL TESTING - ALL AUTOMATIC LIGHTING CONTROL SYSTEM SHALL BE FULLY TESTED TO ENSURE THE CONTROL HARDWARE AND

WHERE OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE CONTROLS, PHOTOSENSORS OR DAYLIGHTING CONTROLS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PREFORMED:

- CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE.
- CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF. CONFIRM THAT THE PLACEMENT AND SENSITIVITY ADJUSTMENTS FOR PHOTOSENSOR CONTROLS REDUCE ELECTRIC LIGHT BASED ON THE
- - RESULTS OF ALL FUNCTIONAL TESTS ON ALL PIECES OF EQUIPMENT.
  - LIST OF DEFICIENCIES FOUND AND CORRESPONDING CORRECTIVE MEASURES EITHER IMPLEMENTED OR PROPOSED ON EACH PIECE OF
  - FUNCTIONALLY TESTED ONCE CLIMATE CHANGES ALLOW.

- OPERATING AND MAINTENANCE MANUALS MANUALS SHALL INCLUDE THE FOLLOWING:
  - SUBMITTAL DATA ON ALL PIECES OF EQUIPMENT REQUIRING MAINTENANCE.
  - MANUFACTURER'S OPERATIONS AND MAINTENANCE DATA ON ALL PIECES OF EQUIPMENT. ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
  - NAME AND ADDRESS AND PHONE NUMBER OF OF AT LEAST ONE (1) SERVICE PROVIDED.

- LIGHTING SYSTEM FUNCTIONAL TESTING REQUIREMENTS

SOFTWARE ARE CALIBRATED, ADJUSTED, P[ROGRAMMED, AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.

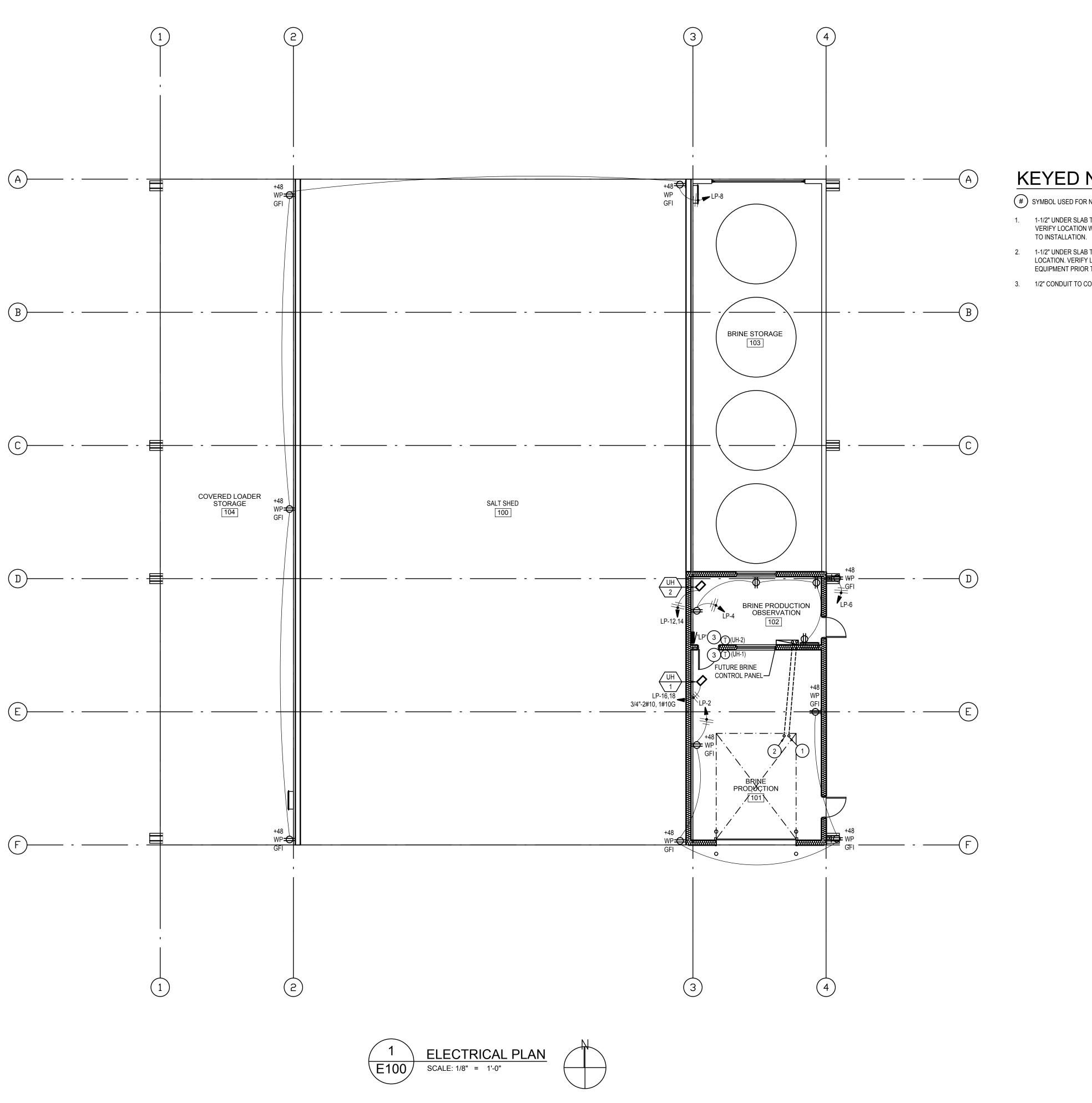
- AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED.
- FINAL LIGHTING SYSTEM FUNCTIONAL REPORT A REPORT OF TEST PROCEDURES AND RESULTS IDENTIFIED AS THE "FINAL LIGHTING CONTROL REPORT" SHALL BE DELIVERED TO THE BUILDING OWNER. THE REPORT SHALL INCLUDE THE FOLLOWING:
  - LIST OF FUNCTIONAL TESTS USED DURING THE COMMISSIONING PROCESS ON EACH PIECE OF EQUIPMENT.

  - 4. LIST OF EQUIPMENT NOT ABLE TO BE FUNCTIONALLY TESTED DUE TO CURRENT CLIMATE CONDITIONS. THESE PIECES OF EQUIPMENT WILL

# **ELECTRICAL**

# ADD. ALTERNATES

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  BRINE PRODUCTION AND OBSERVATION ENCLOSURE
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645 West 25th Street Idaho Falls, ID 83402 208.523.2862

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# KEYED NOTES:

# SYMBOL USED FOR NOTE CALLOUT.

- 1-1/2" UNDER SLAB TO BRINE MACHINE MOTOR LOCATION. VERIFY LOCATION WITH ACTUAL BRINE EQUIPMENT PRIOR
- 1-1/2" UNDER SLAB TO BRINE MACHINE CONTROLS LOCATION. VERIFY LOCATION WITH ACTUAL BRINE EQUIPMENT PRIOR TO INSTALLATION.
- 3. 1/2" CONDUIT TO CORRESPONDING MECHANICAL UNIT.



SHEET TITLE:

# **ELECTRICAL PLAN**

### ADD. ALTERNATES

ADD ALTERNATE NO. 1:
BRINE PRODUCTION AND OBSERVATION ENCLOSURE

- A. BASE BID: ALL WORK ASSOCIATED WITH CONSTRUCTION OF THE BUILDING INCLUDING SITE GRADING AS DESCRIBED ON AND IN THE DRAWINGS AND SPECIFICATIONS. BASE BID INCLUDES ALL FOOTINGS, FOUNDATIONS, AND CONCRETE SLABS ON GRADE AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. BASE BID SHALL EXCLUDE CONSTRUCTION OF PRE-ENGINEERED METAL BUILDING WALLS AND FINISHES WHERE INDICATED ON THE DRAWINGS TO ENCLOSE THE BRINE PRODUCTION AND BRINE PRODUCTION OBSERVATION SPACE. BASE BID EXCLUDES ALL WINDOWS, DOORS, AND INSTALLATION OF OVERHEAD DOORS AND DOOR OPERATORS. BASE BID INCLUDES ELECTRICAL LIGHTING, POWER, AND PLUMBING AS INDICATED ON THE DRAWINGS.
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CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

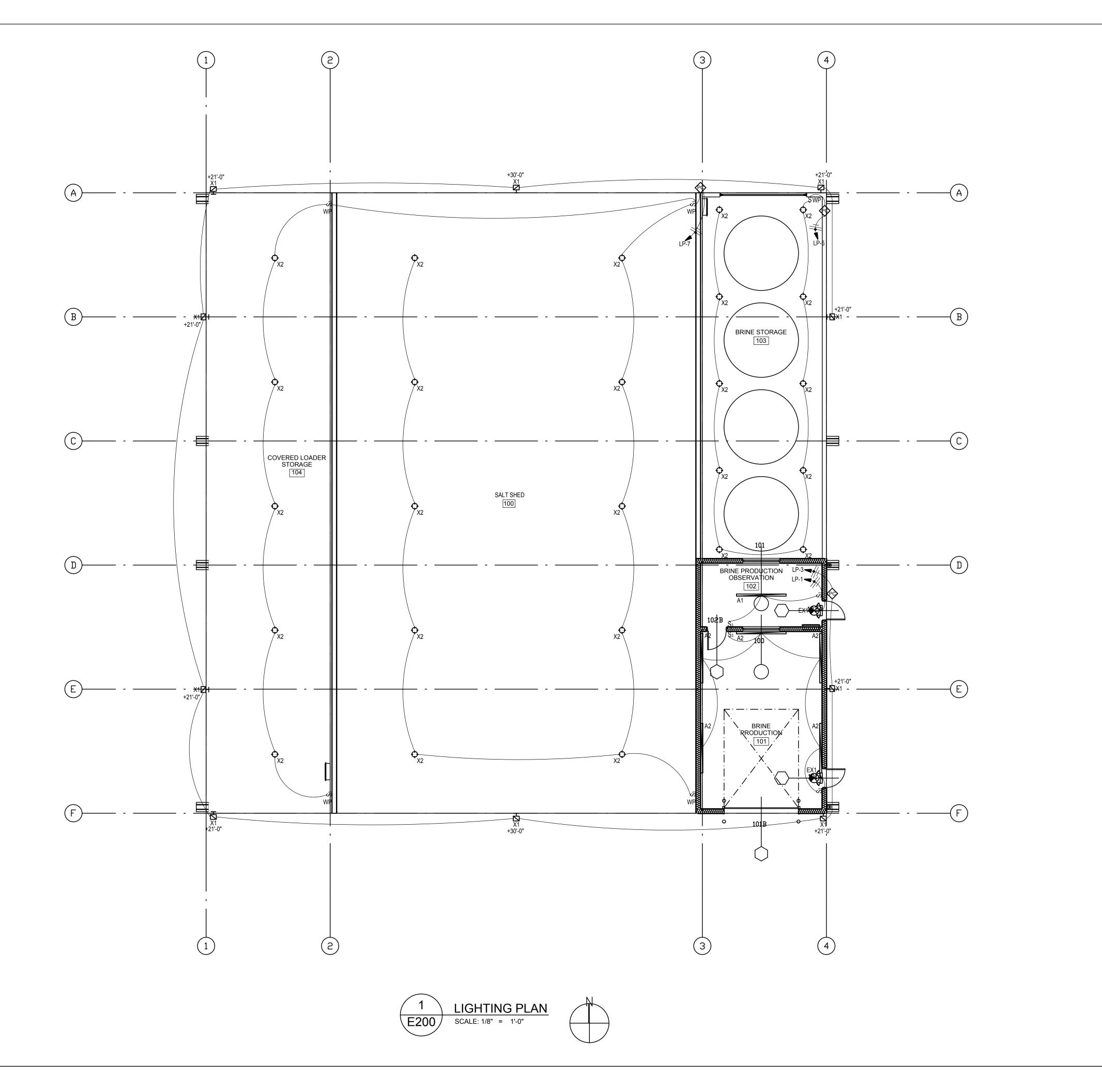
REVISION

DRAWN BY: SBA

CHECKED BY: MNB

JOB NUMBER: 22567 PROJECT DATE: March 2023

E100





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645 West 25th Street Idaho Falls, ID 83402 208.523.2862

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SHEET TITLE:

# LIGHTING **PLAN**

# ADD. ALTERNATES

ADD ALTERNATE NO. 1:
BRINE PRODUCTION AND OBSERVATION ENCLOSURE

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	С	ONTRACTOR SHALL VER
A	۱LL	<b>DIMENSIONS &amp; CONDIT</b>
		SHOWN OR IMPLIED

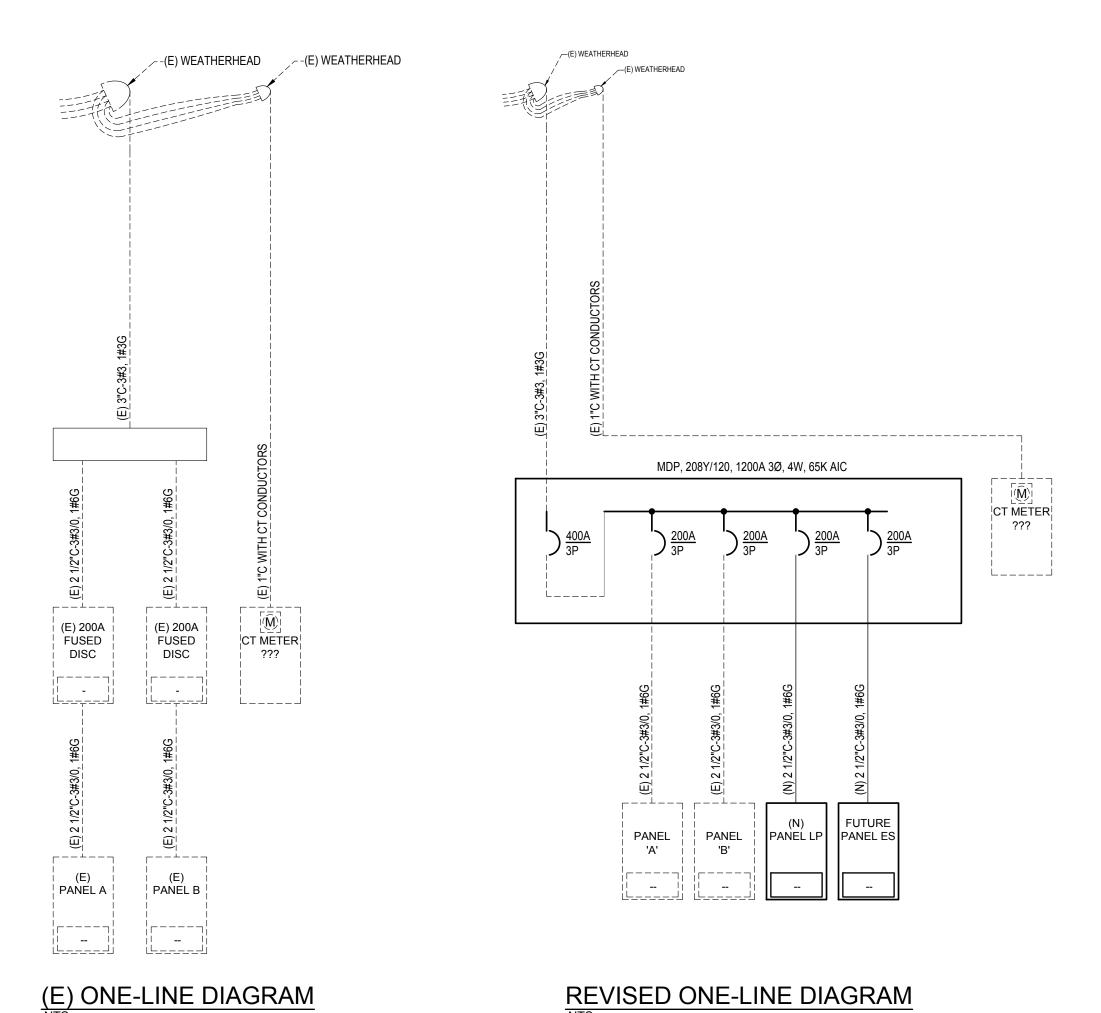
DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

REVISION

CHECKED BY: MNB JOB number: 22567

PROJECT DATE: March 2023

E200



PANEL: LP PROJECT: ITD D4 BLISS YARD SALT/MATERIAL SHED **VOLTAGE**: 240 / 120 V 1 PH 3 WIRE AMPERERATING: 225A WITH 200A CB MOUNTING: SURFACE PANEL BOARD NEM A ENCLOSURE TYPE: PANEL AIC RATING: 22000 BASIS OF DESIGN PANEL TYPE: 1. GFCI FOR PERSONNEL PROTECTION (5mA) 2. A FCI COMBINATION STY LE BREAKER CKT LOAD LOAD AMPS/ AMPS/ LOAD LOAD CKT NOTE VA AMPS POLES POLES AMPS VA NOTE DESCRIPTION DESCRIPTION 1 LTS - BRINE PROD 101/OBSERV 102 432 3.6 20 1 1332 20 1 7.5 900 REC - BRINE PRODUCTION 101 1800 20 1 6.0 720 3 LTS - EXTERIOR REC - BRINE PRODUCTION OBSERV 102 1080 9.0 20 1 950 7.9 20 1 1850 20 1 7.5 900 5 LTS - BRINE STORAGE 103 REC - BRINE STORAGE 103/SALT SHED 100 7 LTS - SALT SHED 100/COVERED STOR 104 REC - COVERED LOADER STORAGE 104 9 SPARE (FUTURE BRINE PUMP) SPARE (FUTURE BRINE SYSTEM) \*\* \* 0.0 0.0 60 2 1500 20 1 12.5 1500 13 SPARE (FUTURE BRINE PUMP) UNIT HEATER (3kW) - ALT #1 1500 2500 UNIT HEATER (10kW) - ALT #1 19 SPARE \*\* \* 20.8 2500 2500 21 SPARE 0.0 20 1 0 0.0 23 SPARE 27 SPARE 0 20 1 0.0 0.0 20 1 SPARE 0.0 20 1 0 20 1 0.0 29 SPARE SPARE 7765.0 VA 59.9 64.7 AMPS 14947 TOTAL VA

**LIGHTING FIXTURE SCHEDULE (23-009)** 

40K

LED

40K

LED

40K

40K

LED

40K

1 SUBSTITUTIONS WILL BE ALLOWED IF SUBMITTED PRIOR TO BID DATE BY THE GREATER OF: 7 BUSINESS DAYS OR THE TIME PERIOD SPECIFIED BY DIVISION 1 SPECIFICATIONS, AND IF DEEMED EQUAL BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING SUBSTITUTED FIXTURES

SUSPENDED

+108

WALL

+108

WALL +96

WALL +16FT

SURFACE MOUNT

STRUCTURE

LAMPS WATTS MFG. & CATALOG NUMBER

LITHONIA NO.

LITHONIA NO.

LITHONIA NO.

LHQM-LED-G

LITHONIA NO.

LITHONIA NO.

CSS-L96-4000LM-MVOLT-40K-80CRI-ZACVH

CSS-L96-4000LM-MVOLT-40K-80CRI

TWX3-LED-ALO-40K-MVOL-DDBTXD

JEBL-12L-40K-80CRI-WH-JEBLSMB1-M6

TYPE DESCRIPTION

8,596 LUMENS, 80CRI

8,596 LUMENS, 80CRI

MVOLT, LED WALL PACK

2,900-13,850 LUMENS

MEDIUM DISTRIBUTION

MVOLT, LED HIGH BAY

WITH SURFACE MOUTING KIT

**GREEN FACE** 

13,630 LUMENS

LIGHTING FIXTURE SCHEDULE NOTES:

MVOLT, (120-277) 8FT LED STRIP LIGHT

MVOLT, (120-277) 8FT LED STRIP LIGHT

120-277V EXIT/EMERGENCY LIGHT COMBO

MEET OR EXCEED THE SPECIFICATIONS OF THE FIXTURES SPECIFIED.

WITH 10FT AIRCRAFT CABLES



OR EQUAL BY

LIGHTOLIER

H.E. WILLIAMS

H.E. WILLIAMS

H.E. WILLIAMS

H.E. WILLIAMS

H.E. WILLIAMS

LIGHTOLIER

METALUX

LIGHTOLIER

METALUX

LIGHTOLIER

METALUX

LIGHTOLIER

METALUX

METALUX

NOTES

**MUSGROVE** ENGINEERING, P.A 234 S. Whisperwood Way Boise, ID 83709 208.384.0585 645 West 25th Street Idaho Falls, ID 83402

208.523.2862 www.musgrovepa.com

PROJECT NO. 23-009

3/16/2023

SHEET TITLE:

**ELECTRICAL DETAILS** 

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS

SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

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ADD. ALTERNATES

OPERATOR AND CONTROLS.

**E300** 

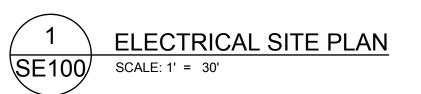
CHECKED BY: MNB

JOB number: 22567

PROJECT DATE: March 2023

REVISION

DRAWN BY:



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Idaho Falls, ID 83402 208.523.2862 www.musgrovepa.com

# **KEYED NOTES:**

# SYMBOL USED FOR NOTE CALLOUT.

- 1. EXISTING LOCATION OF PANEL BOARD 200A 208/120V 3 PHASE. INSTALL NEW 100 AMP 2 POLE CIRCUIT BREAKER IN BRANCH CIRCUIT LOCATIONS \_\_\_\_.
- EXISTING NETWORK RACK END CONDUIT AT NETWORK RACK NEW CONDUIT FOR NEW MATERIALS SHED.

SHEET TITLE:

# **ELECTRICAL** SITE **PLAN**

### ADD. ALTERNATES

ADD ALTERNATE NO. 1:
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DRAWN BY: SBA CHECKED BY: MNB

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ES100